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~~April 14th~~ 17

Jonathan Watson

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Colbatch's VVorks.

ADVERTISEMENTS.

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A

Collection of Tracts, Chirurgical and Medical,

VIZ.

I. A New Light of Chirurgery; or a discovery of a more safe, and speedy way of curing Wounds than formerly usually practised, with several Experiments.

II. The New Light of Chirurgery vindicated from the unjust Aspersions of several unknown Calumniators, *&c.*

III. A Physico-medical Essay concerning *Alkaly* and *Acid* as they relate to the Cause and Cure of Distempers; with an Account of some Distempers, and the Medicines for the Cure of them: Also a short Digression about Specific Remedies.

IV. Further Considerations concerning *Alkaly* and *Acid*, wherein the Terms and Nature of them are more fully explained, *&c.*

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VI. The Doctrine of *Acids* in the Cure of Diseases further asserted, in Answer to Dr. *Tuthill*; wherein are some things relating to the History of Blood, *&c.*

VII. A Relation of a sudden and extraordinary Cure of a Person bitten by a Viper, by the means of *Acids*, &c.

Corrected and Enlarged by *J. COLBATCH*,
A Member of the College of Physicians.

LONDON;
Printed for *Dan. Brown* at the Black Swan and Bible without *Temple-Bar*. 1699.

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Novum Lumen Chirurgicum:

OR, A

NEW LIGHT OF CHIRURGERY.

Wherein is Discover'd a much more Safe and Speedy way of *Curing WOUNDS* than has heretofore bin usually practis'd.

Illustrated with several Experiments made in Flanders *in the Year* 1694.

By JOHN COLBATCH, *Member of the College of Physicians.*

The Third Edition.

LONDON,
Printed by *J. D.* for *D. Brown*, 1698.

TO THE KING'S Most Excellent MAJESTY.

May it pleaſe your Majeſty;

THE great Experience I found of your Majeſty's Bounty and Favors in the late Campagn in *Flanders*, and more eſpecially that inexpreſſible one, intimated by Sir *Henry Bellaſis*, I mean your Majeſty's good Wiſhes, and Care of the meaneſt of your Subjects, when both his Life and Reputation were deſign'd to be ſnatched away by wicked and unreaſonable Men, whom he never injur'd: Theſe Conſiderations, *Royal SIR*, as they bind me perpetually to dedicate my Life to Your Service; ſo they alſo give me Incouragement to preſume, the ſame

Fountain of Favor and Goodneſs will allow Your *Princely Patronage* to the enſuing Sheets, which I had leiſure to write under Your *Majeſty's Banner* the laſt Summer, when there was little Action in the Field.

I am ſenſible every new *Hypotheſis* is at firſt exploded; and my Medicins being intirely new, as well as the Method of their Uſe and Application, I muſt meet with a Legion of Opponents; which makes me the more to ſtand in need of Your Royal Support; but yet I beg it no further in this caſe, than that they may have fair Play, and a clear Stage: Let them ſtand or fall as they deſerve; ſince I am aſſured they will ſtand the moſt ſtrict Examination, and ſevereſt Teſt.

I know that all Arts and Sciences in every Age find a beneficial Improvement by Ingenious Inquirers: and that the Art of *Chirurgery* (as it has bin hitherto practiſed) did never arrive to the *Zenith* of its Perfection, I have made bold, in the ſubſequent Diſcourſe, to affirm.

In

In which Position I am the more confirm'd, when I reflect upon the Modern Discovery of the *Circulation* of the *Blood*, by the Learned Dr. *Harvey*; before whose time a Man would have bin accounted a distracted Person, that should have aver'd that all the Blood in a man's Body should pass thro his Heart fifty times in an hour. And much greater Discoveries and Improvements, since St. *Paul* went coasting to *Rome*, are found out in the Art of *Navigation*, by the assistance of the *Compass*: for now every Cabin-boy can demonstrate the verity of *Antipodes*; tho formerly a Learned Prelat, who first preached that Doctrin, was accounted an Impostor, and severely censur'd for the same.

I pretend not, *SIR*, to establish my new Doctrin by working of Miracles; but I hope I may with modesty enough be positive in my Assertion, That the Method of *Chirurgery* hitherto used is not the best: That all *Probes* and *Tents*, all *Digestive* and *Suppurating Medicins*, all *Cauterising* and strait *Ligatures* are injurious

to their Patients, and procraſtinate their Cure. I am alſo certain that my Medicins will cure any Wounds, whether in the Fleſh, or within the Cavity of the Body, where as dangerous Wounds were ever cur'd by any former Applications, and that with much greater ſpeed and ſafety to the Patient, ſince they prevent Fevers and Mortifications.

If my Medicins prove any way beneficial to Mankind in general, I ſhall be abundantly ſatisfied and rewarded; having no higher Ambition than that I deſire to be accounted, what I ſhall ever endeavor to approve my ſelf,

ROYAL SIR,

The Moſt Obedient of Your

Majeſty's Subjects and Servants,

JOHN COLBATCH.

TO THE READER.

FRiendly Reader, *I have for about seven Years applied my self with all Heartiness and Vigor, to the making of such* Experiments, *whereby I might be capable, in some measure, to relieve the Necessities of those who labor'd under such Distempers, as, by the Methods and Medicins generally used, are, if at all, yet very difficultly to be cured: And I thank God, my Labors have not bin altogether ineffectual.*

Amongst the Multitude of my Experiments, I thought it might not be lost labor to attempt something in order to be serviceable to those Worthy Persons, *who out of a Principle of Bravery, and Love to their Country, do run themselves into the utmost hazard of their Lives; who, if they chance to be wounded, tho but slightly, are thereby often afflicted worse than by Death it self; nay frequently, after they have indur'd the greatest Torture and Misery, Death at last puts a Period to all.*

Having at length lighted upon a pair of Medicins, *the one* Internal, *and the other* External, *which I ſuppoſed would anſwer my Intentions; I began to make Experiments upon* Dogs *and other* Animals, *wounding them in the moſt deſperate manner I could contrive: and in about a Hundred that I made, I had not above five that miſcarried, three of which were before the Right Honorable the Lord* Cutts; *but* two *of thoſe three, as I can plainly make appear, after the danger was over, were* poiſon'd. *I was likewiſe much abus'd in a Soldier of his Lordſhip's Regiment, who after my Medicins had ſet him free from all ill Symtoms, and he almoſt well, in my abſence for four or five hours (having before for five Days and Nights bin conſtantly with him, for fear of Roguery) was made drunk, but by whom I know not, and in an hour or two after my return died.*

My failing in theſe laſt Experiments, I ſuppoſe, was the reaſon I was not then imployed by his Majeſty. However, being ſufficiently ſatisfied of the worth of my Medicins, by my ſucceſs in the Multitude of Experiments I had before made upon Dogs, and two or three upon human Bodies; I laid out a large Sum of Mony in preparing a good quantity of them; and with them, at my own charge, I went to Flanders. *When I came there, His Majeſty was moſt graciouſly pleaſed, by a public Order throout the*

Army,

Army, to give me an opportunity of making appear the Truth of my Pretensions; and, thanks to God, among the great number of Patients I had, there was but one miscarried; and how he died I cannot tell, being my self at that time ill almost unto Death, and so not capable of looking after him.

The Malice of some People against me is sufficiently known; but of this I am sure, that not one Patient I had in Flanders, *but will contradict that printed Relation (in the* Philosophical Transactions *for* February *last) with Mr.* Cooper's *name to it; wherin he pretends to tell the World, That my External Medicin is the greatest* Caustic *imaginable. Now the Nature of all* Caustics *is to create great Pain, but of my Medicins the quite contrary; for instead of that they are the greatest* Anodyns, *or easers of Pain that I ever met with. One very signal Instance wherof you will see in my Experiment made before Sir* William Russel, *&c.*

My Medicins where they are timely enough, and regularly used, cure all sorts of Wounds, without bringing them to Suppuration; *but where that is once begun, they will soon cause a discharge of the digested Matter, and bring the Wound to a state of healing: Nay, where Wounds have bin brought to Suppuration, and in a very ill condition, which, by the common Methods,*

thods, would have taken many weeks before they were, if at all, to be cur'd; by my Medicins, as in the case of the Soldier of Sir James Lesley's *Regiment, and that of Colonel* Coy's, *hereafter related,* &c. *it has bin perform'd in a small time.*

In some Gun-shot Wounds, *where the Bones are extremely shatter'd, by the common Methods, the bringing away of broken Splinters is extremely hazardous and troublesom, but by my Methods not so; tho such Wounds require a much longer time before they are well than others: but who in such Cases will not have a little patience, when he is free from Pain, and under no confinement? All the Patients I have had under these circumstances, have bin fatigu'd with long Marches, exposed to Wind and ill Weather, and indured all other sorts of Hardships, which may have occasioned their being longer in Cure than otherwise they might have bin.*

The number of Experiments I have related, tho I might have added many more in the ensuing Tract, is not great; but those that are, I suppose may be sufficient to demonstrate the Truth of my Pretensions; which are, That all curable Wounds may be cured with much more ease and speed than by the common Methods; and that a great number of those Wounds usually accounted mortal, are not so: And likewise, that the stopping of great Fluxes of Blood, the nonperformance of which

which costs many People their Lives, is to be performed with the greatest ease imaginable.

I have bin sufficiently deter'd from prosecuting my just Designs for the good of Mankind; *having first of all, besides many other great Affronts, bin publicly threatned to be* murdered; *afterwards my self with two of my Friends were secretly* poison'd, *one of whom in a short time died in a most miserable condition, and we two who survive narrowly escap'd with our Lives. However, the utmost malice of these pernicious People shall never hinder me from going on in my honest Undertakings.*

Tho I have met with this ill treatment from some mean, ill principled People; yet I must own that the English Army affords a great many Chirurgeons, *who are Men of extraordinary Worth and Candor, from some of whom I have received very civil treatment.*

I have purposely omitted the using of any, or at least very few terms of Art, *but have made every thing as plain as I can; my design not being to gratify and please Critics, but to satisfy Gentlemen of the Truth of matter of Fact.*

As for my not mentioning what my Medicins are, with the manner of preparing them, I hope for the present that will be excused, because every one knows where to be furnished with them ready to their hands.

But

But some may say it looks too like a Quack *to give large Encomiums of those Medicins which I have not made public to the World. To which I answer, that some mens Censures I value not, having so many great Precedents before me, who gave large and deserv'd Encomiums of those Medicins they made not public during their Lives, some of them not at all; and yet their Medicins were of general use and reputation, as* Helmont's Mercurius Diaphoreticus, Willis's *Preparation of* Steel, *and Tincture of* Sulphur, Needham's Panacea, *&c.*

I have not at this time, neither have I had for these two years last past, the least interest or concern in the Medicins here recommended; yet at the same time I am not asham'd to let this Piece come abroad a third time. The Experiments are every one of them true to a tittle as they are related; and for the Hypothesis, *I shall not desert it, till some body substitutes a better in its room.*

From my House in *Villers-street, York Buildings.*

Novum Lumen
CHIRURGICUM.

HAving for a long time bin much disſatisfi'd with the common Methods of Chirurgeons in the Cure of Recent Wounds; and almoſt every day obſerving the Inconveniences that attended thoſe People who had occaſion to make uſe of them; for my own ſatisfaction, and the good of Mankind, I took into conſideration, whether their Methods were agreeable to Reaſon, and the Subject upon which they wrought. At laſt I was fully ſatisfy'd, that their Practice was moſt unreaſonable; which I ſhall endeavor to evince with as much brevity and accuracy, as the Unſetledneſs of my preſent Condition will admit: which when I have don, I ſhall lay down my own *Hypotheſis*, and doubt not to confirm it both by Reaſon and matter of fact, which is the moſt clear ſort of demonſtration. For the right performance of which task, I muſt firſt give a ſhort account of *Nutrition*, without which my preſent Undertaking will be altogether maimed and imperfect.

To give an account of the Nutrition of Human Bodies, or of other Animals, in ſo clear a manner

manner as ought to be don, I ſhould firſt begin with the Formation of the *Fœtus*, and its original conſtituent parts, with the manner of its Nutrition and Increaſe before all the parts are perfect, and how after, till the time of Birth; the performance of which task only is ſufficient for a Volume: Therfore I ſhall content my ſelf with obſerving only, how what we eat and drink is prepar'd in the Stomach and other Digeſtions, and ſo fitted to ſupply the defects of all the parts of our Bodies; which, tho the moſt hard, continually ſuffer both a decreaſe and increaſe; nay, even in the terms of Chirurgeons upon another occaſion, loſs of Subſtance, and ſupply of that loſs.

The ſolid Food we eat being well chew'd in the Mouth, is there mixed with a Juice contained in the *Glands*, which are in great numbers diſperſed all over the Mouth and parts adjacent; which Juice, being what we call *Spittle*, is highly impregnated with a penetrating *ſaline Spirit*: a demonſtration of the Truth of which is evident in a known and very common Experiment, which is as follows. Let a ſmall quantity of *Mercury* be put into a Mortar, ſpit upon it, and grind it very well with a Peſtle, and the Mercury will preſently be (according to the vulgar expreſſion) kill'd. The like to which nothing we know of will do, but thoſe things which manifeſtly are of a ſaline nature, and that of the Tribe of *Acids* too; for all Alkalious Salts have a quite different effect.

The

The Meat, as above, being well chew'd, and afterwards convey'd into the Stomach, and there diluted with a proper Vehicle, as Wine, Ale, *&c.* (the more generous the better) is, by the means of the foresaid *spirituous*, saline Liquor, (the heat of the Stomach likewise assisting) divided into such minute Particles, as constitute that viscid Liquor we call *Chyle*; which Chyle is discharged out of the Stomach so fast as it is made, by means of the Liver, which constantly presses upon it thro the *Pylorus* into the *Intestinum duodenum*, where, and in the *Jejunum*, it is further attenuated by the intervention of the *Pancreatic* Juice and the Gall, which by the fulness of the Stomach are squeez'd out of those Vessels that contain them into the aforesaid Guts; from whence the finer parts of this attenuated Liquor are receiv'd into a certain kind of Vessels we call *Lacteal* or milky Veins, which are in vast numbers inserted into the aforesaid Guts: the grosser part, by the *Peristaltic* motion of the Guts, is carried downwards to be cast away as Excrement.

Now what is received into the Lacteal Vessels, is carried on to the common receptacle of the Chyle in the *Mesentery*; from whence by a very large Vessel, called the *Thorachic Duct*, into the *Subclavian* Vein; thence, together with the returning Blood and *Lympha*, into the *Vena Cava*, and so to the right Ventricle of the Heart; whence, by the *Systole* or Contraction

traction of the Heart, thro the Arterial Vein, into the Lungs; where, by the Contraction and Dilatation of the Lungs, it is mix'd with the Blood, and that part of it which is fit for that purpose, is there made Blood: The rest only remains confusedly mixed with it, and is used for the Nutrition of the parts, being what we call *Serum*. The Blood, as I apprehend, is not at all made use of for the Nutrition of the parts, but is that red Substance, wherein is contain'd the *Biolienium*, or Lamp of Life, to which it is a sort of *Pabulum*.

I confess some say that *Heat* and *Fire* proceed from nothing else but the parts of Matter being put into violent motion; and others, that there can be no such thing as a Flame in our Blood, because a sufficient quantity of Air cannot pass thro the Coats of our Veins and Arteries, or any other way enter into the Blood to keep that Flame burning: so that the Heat we feel in our Bodies, proceeds from nothing else but the violent motion of the Blood thro the Veins and Arteries.

To which I answer, that having several times tried, by the most violent Agitation of many fluid Bodies in inclosed Vessels, I could never perceive the least warmth; nay I have kept Blood as it came warm out of the Veins in continued violent motion, and instead of hindering, it has facilitated its cooling.

But for that Fire, which I judg to be in the Blood, I suppose it quite different from common

mon *culinary* Fire, and burns by quite different means, and has a different *Pabulum*. For it is well known, that Blood by Distillation yields but a very little of any such substance as will afford supply to common Fire; and yet from Blood, and that Excrement of it we call Urin, by a peculiar management, may be obtain'd that substance we call the *Phosphorus*, which is as much Fire as any thing we know, it being so inflammable, that unless it be immerg'd in Water, it presently consumes all away in Flame. There is an old Maxim, that *Nil dat quod in se non habet*; which is very pertinent to the point in hand: and from whence I infer, that if there were not Fire in the Blood actually before, I cannot understand how this most firy Substance can be obtained from it.

But there still lies a mighty Objection in my way, which I shall endeavor to clear before I go on. It is this: Suppose the heat of the Body proceeds from this firy substance in the Blood; how coms it to pass, that in many cases, as in Wounds, when matter is generating, *&c.* the motion of the Blood and heat of the Body is greater than at other times, when that matter, which enters into the Blood, and causes this hurry and disorder, has no tendency to increase the Flame?

To which I answer, that tho such Particles entring into the Blood, may increase the heat and motion of it; yet it is not out of any na-

tural tendency they have *per se* so to do; but accidentally they may do it, by causing an intestin motion or fermentation, wherby the *Cement* of the Blood being loosned, and its Texture much spoiled, this Flame is at liberty to burn more furiously. An instance of which may be seen in common Fire: for if the combustible matter of which it is to be made, be laid close together, it will scarce burn at all; but being laid at a little distance, it presently burns briskly. And if it were not somthing more than mere motion a little excited, which is the cause of Fevers, I cannot understand how a very fat Person in a violent Fever should in a few days be reduced to almost nothing but Skin and Bones, when the visible Evacuations of *Urin* and *Stool* are generally less than at other times; which frequently happens. Now it is well known, that no Liquors will ferment, but those which manifestly abound with firy Particles, as all sorts of vinous Liquors; and the stronger all such Liquors are, the more readily they ferment.

The confused mixture of *Blood* and *Serum* (I stick not to call it a confused one, because with good Glasses the Blood may be seen flotting in the *Serum* in the form of small *Globules*) is carried back from the Lungs by the *venal Artery* into the left Ventricle of the Heart, and from thence protruded by means of the *great Artery*, which is immediatly divided into a great many branches, to all parts of the

 Body,

Body, even the most minute; the Bones themselves not being destitute of Arteries to bring this mixture to them for their Nutrition, and Veins to carry back what is superfluous.

The manner of Nutrition I conjecture to be as follows. The Arteries, which, as before observ'd, at their Origin are very large, are at last divided into an almost innumerable company of small Branches, even so small, that the best Glasses will scarce discover them to us. At the extremities of these small Arteries is that compound Liquor we call *Blood*, discharged upon or into the *Muscular Fibers*; and not only the soft parts, but even the Bones themselves are observed to be fibrous; which Fibers, tho never so small, are yet hollow. Now there are vast quantities of the small Particles, which compose not only the fluid, but also the most solid Parts, continually discharg'd by insensible Transpiration. And *Sanctorius*, that famous *Roman* Physician, in his nice Experiments observes, that we waste more every day by insensible Transpiration thro the *Pores*, than by the visible, sensible Evacuations of *Urin* and *Stool*. The waste made by insensible Transpiration, is repair'd by the *homogeneous* part of that Liquor, contain'd in the Arteries, commonly called *Serum*; which Serum is adapted or made fit by the Pores of the parts it is brought to, to be applied to such places where there is any

waſte. But how the parts of matter are modified and adapted ſo as to conſtitute a Body, I think would be arrogance in me to pretend to define; but that Bodies of very different natures may, and do receive nutrition and increaſe from one and the ſame ſubſtance, which in it ſelf ſeems to be ſimple and *homogene*, the following Experiments (the one a common one, and known to every body, the other two made by two of the greateſt Men theſe laſt Ages have afforded, *viz. Helmont* and *Boyl*) will I ſuppoſe clearly demonſtrate.

Let a *Crabtree ſtock*, which has ſix branches, have into each branch a Graft ſet, each Graft of a different nature; as for inſtance, let three of the grafts be of *Pears*, each of a different ſort, and the other three of *Apples*, ſom ſweet, ſom ſour; and the Juice brought up into the Stock (which, had the top bin left on, would only have produc'd Crabs) being brought now into the Grafts, is by their Pores ſo alter'd, that it affords not only nutrition and increaſe to the Grafts, but inables them to bring forth Fruit, each according to its kind: which ſight I have ſeen with great delight.

The ſecond Experiment was made by that great Inquirer into Nature's Secrets, *Helmont*, as follows. He took two hundred Pound of *Earth* dried in an Oven, and having put it into an Earthen Veſſel, and moiſten'd it with

 Water,

Water, he planted in it the branch of a *Willow-tree* of five pound weight; this he watered as need required with Rain, or with distilled Water: and to keep the neighboring Earth from getting into the Veſſel, he uſed a Plate of Iron tinn'd over, and perforated with many Holes. Five Years being effluxed, he took out the Tree and weigh'd it, which, computing the Leaves that fell four *Autumns*, he found to weigh one hundred ſixty nine Pounds, and about three Ounces: And having again dried the Earth it grew in, he found it wanted of its former Weight of two hundred Pound, only about two Ounces; ſo that one hundred ſixty four Pound of the Roots, Wood, and Bark, which conſtituted the Tree, ſeem to have ſprung from the Water only.

The third Experiment, being Mr. *Boyl's*, was this. He ordered his Gardiner to dig up a convenient quantity of good Earth, and dry it well in an Oven, to weigh it, and then to put it into an Earthen Pot, almoſt level with the ſurface of the Ground, and to ſet on it a ſelect Seed of *Squaſh*, which is a kind of *Indian Pompion*, that grows apace; this Seed he order'd him to water only with Rain or Spring-water. The Plant flouriſh'd and grew apace; and tho ſown too late in the Year by two months, yet being gather'd at the proper Seaſon, the *Pompion*, *Stalks*, and *Leaves*, weigh'd three Pound wanting a Quarter;

then he took the Earth, and dried it nicely, and found it weigh exactly as much as before.

As a confirmation of the Truth of the two last Experiments, every body knows, that *Mint*, and such like Plants, being set in a Bottle of Water, flourish as much, or more than those planted in the Earth. Now these Vegetables, tho they receive their nutrition and increase from so simple and *homogene* a substance as Water; yet by a Chymical *Analysis*, there may be obtained from them such substances, as are not easily to be mixed with Water, and seem to be of a quite different nature from it: nay, the very same substances, for the most part, may be obtain'd from Vegetables as from Animals, if they are rightly managed. For tho volatil urinous Spirits are generally own'd to be the product of animal substances only; yet I well know, that from almost all sorts of Vegetables, without any addition, only suffering them to putrefy, may be obtained a Spirit and volatil Salt, no way differing from that of *Hartshorn*, and human Blood. From all which I gather, that if the great variety of Vegetables, which are of such different natures, have their nutrition and increase from so simple a Body only as Water; I know no reason to doubt that all the parts of a Human Body, or other Animals, may have their nutrition and increase from the Serum of the Blood, which is analogous to Water.

When

When there is, by any accident, a Diviſion made in the fibrous parts of the Body, which is what we call a Wound, (and by the way I think there is no difference, only *ſecundum majus & minus*, between thoſe waſtes made by *Tranſpiration* which are natural, and a Wound made by *Force* which is preternatural) Nature her ſelf would in a ſmall time make a Union, if ſhe was not hinder'd, but aſſiſted. Now I ſhall endeavor to make appear, that by the common Methods and Medicins of Chirurgeons ſhe is hinder'd, but aſſiſted by mine; which is all not only in this caſe, but in all others where Nature is oppreſt, that is requir'd of Phyſicians or Chirurgeons; who are, or at leaſt ought to be Miniſters of Nature, and not her Oppreſſors.

Now to ſhew wherin lies the unreaſonableneſs of the common Methods of Chirurgeons in the Cure of Wounds, and wherin they hinder and oppreſs Nature in her moſt regular Operations: Suppoſe a Wound be made, and it's no matter where it is; for what will cure a Wound in one place, will do it in another, the matter brought for the nutrition and ſupply of all the parts being the ſame. The two Experiments before mention'd are ſufficient to confirm, that what will afford nutrition and increaſe to a muſcular fleſhy part, may do the ſame to a Bone; for the *Pompion* is a ſoft Subſtance like muſcular Fleſh, and the *Willow* a hard brittle ſubſtance, analogous to that of

Bones; and yet both had their nutrition and increase from Water only.

Now let a Wound be made where it will, and how it's made matters not, whether it be by Cutting or Contusion; only there is this difference between those Wounds called *incised*, and those called *contused* ones, (tho by the way, I think I may safely affirm, there is no Wound made by incision but may as properly be called a contused one, let the Instrument be never so keen with which it is made, as a Wound made with a Bullet; but not in altogether so eminent a manner, the difference being only *secundum majus & minus)* that there is a larger space between the Lips of the one, than of the other; and consequently Nature is at more charge and trouble, and requires longer time for making a Union of the one than of the other. For tho in both there requires the generation of fresh substance; yet in Gun-shot Wounds there is a greater quantity to be generated than in incised ones, the Lips of the Wound being further asunder; and so of consequence the more work there is to be don, the longer time Nature requires for the doing it.

Let a Division be made in any of the parts of the Body, which, as before observed, is what we call a *Wound* (how it is made matters not, and whether it be by cutting or contusion) the nutritious Juice is immediatly brought to the extremities of the wounded Vessels

Veſſels all over the Wound. Now I ſtick not to call the ſmalleſt Fiber, or Fibril, a Veſſel; for if they were deſtitute of Cavities, they could never be nouriſh'd, much leſs admit of increaſe. Now all the Medicins us'd in the common Methods of Chirurgery, are of ſuch a nature, as to relax the divided Fibers ſo much, that they cannot contain the nutritious matter brought to them, but let it paſs into the Wound, where it is by the ſame Medicins corrupted, and turn'd into that ſubſtance we commonly call Matter. Now the Corruption of the nutritious Juice cannot be perform'd without a ſort of *Fermentation*; and it is the fermenting Particles, that fretting the Fibers, cauſe inflammations in Wounds; and by entring into the Blood, and dividing its Texture, cauſe *Symtomatic* Fevers, which frequently prove ſo fatal. To confirm the truth of which, I appeal to the experience of all Mankind, who have ever bin wounded (and there is ſcarce one among a thouſand but has received ſome ſort of Wound or other) whether they have not felt pain, and had ſomthing of a Fever, more or leſs, according to the largeneſs of the Wound, during the time that matter was generating. Now it is evident, that whatever will cauſe ſuch ſort of pain, and create a Fever, muſt be of a *heterogeneous* nature, and an Enemy to that Body (for I verily believe, that only the Medicins applied are the occaſion of all thoſe ill

ill Symtoms that frequently attend Wounds) to which it is applied, or into which it is receiv'd. Of the truth of which, even the nature of a Fever is a sufficient confirmation: for a *Fever*, in the terms of many great Men, is nothing else but a *Nixus Naturæ*, or contention of Nature to throw off its Enemy. Others call a Fever *Sanguipurgus*, or a Purifier of the Blood, which is the same with the former, only in different words. And a late learned Author, the worthy Dr. *Cole*, in his Treatise of *Intermitting Fevers*, the only rational Piece in my opinion that ever was writ on that Subject, plainly makes it appear, that the seat of Agues is in the *Cortex* of the Brain, from whence, at certain periods of time, the matter is thrown off, by the mediation of the Nerves, to all the parts of the Body, which causes that Coldness, Rigor, and Horror perceiv'd at the beginning of a Fit; this matter being afterwards receiv'd into the Blood by the Capillary Veins, which are every where dispers'd, and being of a heterogeneous nature to the Blood, puts it into a violent motion and agitation, in order to throw it off: which irregular motion never ceases, till all the matter causing it is thrown out by the external cuticular Pores. I could use many more Arguments, to prove, that not only *Symtomatic* Fevers, but even all sorts of continued ones, do proceed from heterogeneous Particles being admitted into the Blood, which for brevity's sake I shall omit. Now,

Now, after they have with ſo much hazard and trouble generated matter (tho many times inſtead of generating matter, their ſuppurating Medicins cauſe Mortifications in the parts, eſpecially if there be an ill habit of Body before-hand; the bad conſequences of which every body knows, but eſpecially to their ſorrow thoſe who have experienced it themſelves) they uſe *mundifying* Medicins; and when Nature is almoſt tir'd and oppreſs'd, weak as ſhe is, they leave her to do her own work: and for my part, I don't at all ſee or underſtand, that ſhe is in the leaſt aſſiſted by the Medicins they afterwards uſe.

But what I have bin hitherto ſaying concerning their Medicins and Practice, relates only to external *Fleſh-wounds*; and if ſuch hazard attends the cure of theſe Wounds, what is to be expected in thoſe within the Cavity of the Body, where the Lungs, Liver, Guts, *&c.* chance to be wounded? In ſuch caſes their Medicins are by themſelves own'd to be inſufficient. And if at any time it happens, that any of the forementioned parts are wounded, and the Party recovers, themſelves account it almoſt miraculous, becauſe ſuch Wounds, by the general vogue of the greateſt Chirurgeons, are accounted mortal, and not without reaſon: For to bring a Wound in the Lungs, Liver, Guts, *&c.* to ſuppuration, is to bring certain Death; and to cure a wound without bringing it to ſuppuration, they don't pre-

pretend. So that if any of the forementioned Wounds are cur'd by them, it is to be attributed to ſom ſtrange and ſecret Operation of Nature unknown to every body, and not to their Skill: for he only is accounted skilful in the cure of any Malady, the moſt of whoſe Patients recover; but ſuch as have not one in ten of their Patients that don't miſcarry, are not to be accounted ſo: And I verily believe, that not one in ten of thoſe wounded in the Cavity of the Body, and managed after the common Methods of Chirurgeons, have recover'd. So I leave it to every man's Judgment, which Method is moſt to be confided in, either that where ſcarce one in ten miſcarries, as in mine; or the other, where not one in ten recovers, as in the common Methods of the Chirurgeons.

Beſides the Inconveniences and Inſufficiences of their Methods and Medicins already mentioned, there is ſtill another as great, *viz.* when any large *Blood-Veſſel* is wounded, how to ſtop the *Flux* of Blood; which is not to be perform'd without either actual or potential *Cauteries*, the inconveniences of which almoſt every body knows: nay, Cauteries themſelves are not to be truſted without very ſtrict bandage, which always, or for the moſt part, cauſes Mortifications; the neceſſary conſequences of which is loſs of Limbs or Life, many times both, as I have ſeen with great regret.

In

In all Wounds, tho but fleſh ones, of any conſequence, they confine their Patients to the loweſt Diet imaginable, forbidding them to eat Fleſh, or drink Wine; and tho there has bin great loſs of Blood before at the Wound, yet they ſeldom or never fail, to the great weakning of their Patients, to let Blood in great quantities, which they often repeat, to prevent the increaſe, and for taking off the Fever, which always more or leſs attends them, and in ſpite of all they can do, frequently proves of fatal conſequence.

I have not mention'd their *Tenting*, *Probing*, and other nonſenſical trumpery, which is ſtill uſed by moſt Chirurgeons, to the great detriment of their Patients, becauſe many judicious Chirurgeons in all places begin to leave them off; who, I queſtion not, will be glad to change their old inſucceſsful way of Practice altogether, when once inform'd of a better and more certain Method.

To give an account of the Methods I uſe in the cure of Wounds, will not take up much room, they being ſhort and eaſy, and not round about, as the common Methods are. However, that I may do it ſomwhat clearly, I ſhall begin with *inciſed* Wounds, ſo called; and next proceed to give an account of *contuſed* ones, made with ſhot or the like: Firſt, where only the *muſcular* fleſhy parts are wounded; and ſecondly, where the *Bones* are broken and ſhatter'd to pieces, and the *Tendons*

Tendons torn: which last sort of Wounds I have not touched upon in my account of the unreasonableness of the Methods commonly used in the cure of Wounds; for if there be such hazard and trouble in the cure of incised Wounds, all will allow, that it must be so in a much more eminent degree in such Wounds as these. Suppose a Wound be made with a Sword, or other cutting Instrument, the length or depth of which signifies nothing; I make a Solution of my *Powder* in Water, for want of which in Urin: and as soon as conveniently I can, the sooner the better, I either squeeze, or with a *Syringe*, if the Wound be deep, inject into the Wound som of the said Solution: I then close the Lips of the Wound together, which if wide and large, I stitch up. When I have so don, I apply a *Pledget* of fine *Tow*, wet in the said Solution, to the Wound, not letting it go into it, but only to cover the edges of it, and lie all over it. And if there chances to be any large *Artery* cut, I hold on the Pledget close with my Hand till the Flux of Blood ceases, which will be in a small time, otherwise not; afterwards I bind it on with a very easy Ligature, then I give my *Tincture* in Wine, and repeat it according to the Directions at the latter end of the Book.

Now to prove my Medicins agreable to the Nature of Human Bodies, and of that Juice by which I conjecture (for to be sure I cannot) the Body is nourish'd, and more efficacious than

than the Medicins uſed by Chirurgeons, the following Arguments will, I ſuppoſe, evince; they not being the effects of Fancy, but of moſt certain and reiterated Experiments.

Firſt of all, my Medicins never cauſe any Pain, unleſs it be juſt when the external one is ſqueez'd or injected into the Wound, and that pain is very little more than what would be cauſed by uſing Spring-water in the ſame manner.

Secondly, There is no Pain afterwards, but the parts are pliant and eaſy, as if not hurt at all.

Thirdly, if there has bin great Pain before, according as it has bin greater or leſs, ſo it has bin longer or ſhorter before taken off, but the greateſt in a ſhort time. As when a Wound had bin long receiv'd, and had other Applications to it before mine, had bin much inflam'd, and the parts adjacent much ſwell'd, and conſequently the Party in great pain; all theſe Symtoms have bin totally taken off in 24, or 48 hours at furtheſt; and many times in ſuch Caſes, the greateſt Pain taken off in a few minutes. But they have never bin the cauſe of pain, ſwelling, or inflammation; which by the way is a certain argument they are no *Cauſtics*, as ſom maliciouſly and falſly report.

Fourthly, There has never any ſuch thing as a Fever, let the Wound be internal or external, attended any who have uſed my Medi-

cins

cins ſoon after they have bin wounded; but ſeveral who have bin ill manag'd before, and thrown into violent Fevers, have in 24 hours, by the uſe of my Medicins, bin totally freed from them, and that without Blood letting, or abſtaining from Fleſh or Wine; the more of which they drink, ſo they keep within bounds, I always find them the better.

Fifthly, In all inciſed Wounds, where my Medicins have bin ſoon enough uſed, and no other Application preceded, they are perfectly cur'd in a few days, without ſuppuration; and I have frequently obſerv'd that at about four days end, ſuch Wounds have bin filled with a Subſtance much like *Hartshorn-gelly*, which I have conjectur'd to be young Fleſh; and in two or three days I have found my conjectures true, the ſaid Subſtance being converted into good Fleſh. But where Wounds have bin long receiv'd, and matter generated, they have bin cured in a ſmall time, without repeating the Application above once in three or four days. I have had to do with Wounds long receiv'd, which have bin both deep and large, and by the common Methods muſt have diſcharg'd a great quantity of matter; but the quantity of matter com away after uſing my Medicins has bin ſo ſmall, that I have good reaſon to conjecture, it was no more than what was form'd before they were applied.

As for Gunſhot Wounds in any of the fleſhy parts,

parts, they are cur'd in the ſame manner with the former, and without the leaſt ill Symtom; only with this difference, that wheras in inciſed Wounds, if my Medicins are applied as ſoon as, or preſently after, the Wound is receiv'd, there is little or nothing coms away from them; but in Gunſhot Wounds, the *Glands* and *Lymphatic* Veſſels being broke and torn to pieces, there is for ſom time a conſiderable quantity of the watry matter contain'd in thoſe Veſſels diſcharged out of the Wound; and the loſs of ſubſtance being great, they require a longer time to cure.

But ſom may object, How is it poſſible, without bringing the Wound to Suppuration, to cauſe a diſcharge of extraneous Bodies, as pieces of Clothes, Splinters of Bones, *&c.* which for the moſt part are lodg'd in Gunſhot Wounds?

To which I anſwer, That the ſaid watry Liquor being continually diſcharged out of ſuch Wounds, and the parts adjacent not being ſwel'd, as they never are ſo as to cloſe up the Orifice of the Wounds; by means of the ſaid Liquor they are brought away without any hazard or trouble, and for the moſt part without any pain at all, eſpecially if of a paſſable bigneſs; if not, the Orifice muſt be dilated to make way for them. And as for that *Slough* of which ſom make ſo great a noiſe, it is alſo by means of the Liquor brought away without any digeſtion, it being nothing

but a complication of torn and broken Fibers lodg'd about the sides of the Wound. As for broken Bones, they being put into their right posture, the nutritious Juice brought to them fills up the void spaces, and by the Texture of its parts in a little time grows as hard as any other part of the Bone. What has bin said of Bones and Flesh, may be said of Tendons (the wounding of which was heretofore accounted as fatal as any thing; and being of a *mucilaginous* nature, digestive Medicins were wont to rot and destroy them, and so cause Mortifications) so that their ends, if totally divided, can be brought any thing near together; which if it be not possible to be don, as for the most part it is, there is no other ill consequence, but losing the use of that part to which it belongs.

From what has bin said, I think I may rationally infer, that my Medicins are agreable to Nature, and assist her in her regular Operations: And on the contrary, that the common Medicins are disagreable to Nature, and hinder her in her Operations.

As for instance: Two Officers of the Regiment of *Fusileers*, that were wounded, were in the same Tent together: the one of good Habit of Body, had receiv'd a slight Wound in the Arm; his Wound had bin receiv'd three weeks, and was manag'd according to the common Methods; his Arm was much swel'd, greatly inflam'd, and he in great pain, and not

not like to be well in a long time. The other of a very ill habit of Body, had a Sword run thro the most fleshy part of his Thigh, the Orifices on each side 3 Inches long; and yet being managed according to my Methods, in a little above a week was perfectly well, having felt no pain from the beginning.

Their Medicins corrupt the nutritious Juice, and turn it into Matter. My Medicins being friendly to the nutritious Juice, prevent it from degenerating or corrupting; by which it is capable of performing the work design'd it by Nature, which is to fill up all Vacuities, either naturally or forcibly made, and is performed in the manner following. The nutritious Juice being by the Arteries brought to the Parts, the Particles of it are by the Pores of the Parts so modified, as to form a Body like that thro whose Pores it past; from whence it is easy to imagin, how very large spaces forcibly made may be again fill'd up with fresh Substance, like what was there before.

Their Medicins cause inflammations and swellings, and consequently pain in and about Wounds: Mine not so.

Their Medicins either *per se*, or by accident, seldom or never fail to cause Symtomatic Fevers: Mine not so; but on the contrary either prevent, or take them off when fixed, without starving and destroying Nature for want of necessary Aliment.

By their Methods and Medicins they can't ſtop Fluxes of Blood without moſt diſmal Conſequences. My Medicins ſtop Fluxes of Blood with eaſe and ſafety, and at the ſame time cure the Wounds.

To confirm what I have ſaid, I refer to the following Experiments, of the Truth of which 'tis no difficult matter to be inform'd.

To conclude all; I would not have any to underſtand me, as if I poſitively aſſerted, I can cure all ſorts of Wounds, and that no one ſhall miſcarry under my Hands: for whoever dos ſo is greatly miſtaken; and I muſt own there may be a few unlucky Wounds within the Cavity of the Body that may elude the efficacy of my Medicins; yet that moſt of 'em may be cur'd with all the eaſe imaginable. But for External Wounds, let them be what they will, I think there are few or none, if people will be regular, but may be cur'd without hazard or inconvenience.

Experiment I.

John Mahullon, an Iriſh man, in the Regiment of Col. *Brewer*, in the Company of Capt. *Puryfye*, was in a Rencounter run thro the left Arm, and into the left Breaſt between the ſecond and third Rib, on which he preſently fell down as dead. He ſays, he found the Sword paſs into the inmoſt part of his Breaſt.

Breaſt. Immediatly he had a great difficulty in breathing, and a weight upon his *Diaphragme*, likewiſe a great quantity of *ſpumous* Blood and Air guſh'd out at the Wound in his Breaſt; which Symtoms, I ſuppoſe, are a clear demonſtration that his Lungs were wounded. Mr. *Chomly*, Chirurgeon to the Regiment, immediatly applied my external Medicin, which ſtopt the Flux of Blood at both parts, which at the Wound in his Arm was alſo very great. But he did not give the internal one, as he ought to have don that Night; ſo his ſhortneſs of Breath, and weight upon his *Diaphragme* continued: but the next Morning giving it him, he was immediatly freed from thoſe Symtoms, and that day march'd on foot ſix miles with the Army, and was not in the leaſt out of order, or had any thing of pain after; neither did he at all confine himſelf to his Tent.

Experiment II.

ONE *Paterſon* a Scots-man, in the Regiment of the Right Honorable the Lord *George Hamilton* (now Earl of *Orkney)* was about 8 a clock one Evening run into the Belly about two Inches above the Navel on the right Side; the Sword, as himſelf and other Spectators ſay, enter'd at leaſt 7 or 8 Inches, and being a very broad one, could not fail of doing

much mischief. I may conjecture, for to be positive no man can, that the Sword past thro the Liver; and the Symtoms attending him do, I believe, plainly demonstrate that the *Intestins* were also wounded. By his Lordship's Command I was sent for to take care of him; but not being at home, Mr. *Chomly* went to him, and in his Lordship's presence applied the external Medicin, and gave him the internal one in a large Draught of Wine as usual. After he had taken care of him, he immediatly applied himself to find me, to give me an account of our Patient's condition; but his Account was so scurvy a one, that I was sorry he had medled with him, which had I bin there, I should not have don, by reason my whole Reputation lay at stake; for it was but two days before that his Majesty was graciously pleased by public Orders throout the Camp, that notice should be given to my most worthy Friend Sir *Henry Bellasis*, of the first Man wounded, that he might see whether I were capable of performing what I pretended to. Now the Symtoms that attended this Man were violent Vomitings, and an intolerable Soreness and Pain about his Belly and in his Bowels; and for that Night he had no rest at all. In the morning when the General saw him, his circumstances were little or nothing better; but towards the Evening he began to rest, and before next Morning his ill Symtoms totally vanished. For two days he had no stool; and

when

when he had one, it was ſcarce any thing but coagulated Blood. On the fourth day he was able to go with me to Court, where the General and other Officers ſaw him very well. Beſides the foreſaid Wound, he was alſo wounded in two other places, and much bruiſed, of all which he perfectly recover'd.

Experiment III.

MR. *Lane*, a Voluntier in the Regiment of Sir *Bevil Greenvil*, was in a Rencounter run into the left Pap: the Sword, by all accounts, enter'd a great way into the Cavity of the Breaſt. The Chirurgeon of the Regiment was by Sir *Bevil*'s Order ſent to take care of him, who preſently returned and told Sir *Bevil* that he was a dead Man, and all the World could not ſave him; for that he no ſooner thruſt his Probe into the Wound, but it was beat back by the Pulſation of his Heart: he likewiſe told the ſame to Mr. *Willy* Chirurgeon to Col. *Selwin*'s Regiment, and to ſeveral others; but withal, in a ridiculing manner, ſaid, they might ſend for their famous Doctor, meaning me, and if he could cure him, he would fight Duels every day. I was ſent for, but being ill could not go; ſo I ſent Mr. *Chomly*, who notwithſtanding his ill Circumſtances, being animated by what he had before ſeen, was not afraid to take him into his care;

tho the Symtoms that attended him were as bad as could be, and he alive. He had ſtrong Convulſions, ſhortneſs of Breath, a great Load upon his *Diaphragme*, and a large quantity of *ſpumous* Blood guſh'd out at the Orifice of his Wound, together with ſuch a Blaſt of Air, that it was almoſt equal to an ordinary Pair of Bellows. He applied the external Medicin, and gave him the internal one, which immediatly reliev'd him; but for 48 hours my Friend Mr. *Hamſtead* was forc'd to keep a Guard upon him, for fear the Chirurgeons ſhould do him a miſchief, who before attempted to play me ſom ſlippery Tricks. At the end of which time Mr. *Lane* ſent me word, he could lie on the vvounded Part vvithout the leaſt pain; and that my Friend need not give himſelf any more trouble, he being as vvell as ever in his Life, only vveak vvith the great loſs of Blood: Accordingly my Friend left him. But the next Evening there came betvveen tvventy and thirty Chirurgeons, vvho by violence (I ſuppoſe having before made him drunk) pull'd off the Dreſſings from his Wound, vvith no other deſign, as I can imagin, than to murder him, having applied nothing in its room, but left the Wound bare; in vvhich poſture it continued all Night. My People going next Morning to viſit him, he told 'em the Story; and vvithal ſaid that every thing vvas vvell, his Wound being ſo far heal'd before, that their pulling off the Dreſſings did him no

 harm:

harm: hovvever, they made another Application, which, to the beſt of my remembrance, was the ſecond and laſt that was made. But from the beginning he took the Tincture once in five or ſix hours in a large Draught of Wine. I have ſince ſeen him on the long march, walking on foot, when he told me he was as well as ever in his Life. This Man had as ill a habit of Body, as it was poſſible to have.

Experiment IV.

MR. *Fletcher*, a Lieutenant in Col. *Fitz-Patrick*'s Regiment of Fuſileers, was in a Rencounter run thro the moſt fleſhy part of his right Thigh; after the Sword was in up to the Hilt, he and his Antagoniſt clos'd, and fell upon the Ground, where they continued ſtrugling a conſiderable time, the Sword being ſtill in Mr. *Fletcher*'s Thigh: but Company coming in, they parted 'em, and pull'd out the Sword, and ſent for Mr. *Chomly* to take care of him, who when he came, found the Orifices on each ſide at leaſt three Inches long, and very wide; from which proceded a very great Flux of Blood. He firſt ſqueez'd ſom of the Solution of my Pouder into the Wound, then ſtitch'd it up, and applied ſom Pledgets of Tow, wet in the Solution, to both Orifices; afterwards he gave him the Tincture in a glaſs of Wine, which was repeated once in

5 or 6 hours, for three days. In one week's time he was able to walk abroad; he publicly declar'd that from the first time my Medicins were applied, he felt no more Pain in or about the Wound, than if he had never bin hurt at all.

Experiment V.

MR. *Pool*, a privat Gentleman in the Honorable Brigadier *Lumley*'s Regiment, in the Troop of Capt. *Billingsly*, was near his Majesty's Quarters at *Rosebeck*, with a Sword run into the Stomach: he had immediatly a very great Flux of Blood, both at the Wound, and at his Mouth; but that at his Mouth was far the greatest. Several of the Servants belonging to his Majesty, who saw him bleed, do positively declare, that, according to a modest computation, he lost at both places two *Field-measures*, which are four English Quarts of Blood, before my People came to him. He was so convulsive, that all who saw him, thought it impossible for him to live an hour: but my Medicins being us'd according to the usual Method, the Flux of Blood immediatly stopt; and he, as almost all my Patients have, declar'd that within a minute or two after taking the Tincture, he found himself refresh'd and reviv'd beyond expression; and presently his Convulsions left him, and that Night he slept very well. On the

the morrow a Rumor, by whom rais'd I know not, was ſpread about the Court, that he was dead; but my Friend Mr. *Sell*, a Page of the Back-ſtairs to his Majeſty, going to the Tent where he lay to enquire into the truth of it, inſtead of finding him dead, ſaw him heartily knawing of tough, ill boil'd Mutton, which he forbad him to do; ſo he left off, but withal ſaid, *Sir, if I muſt not eat, I'll drink to you*; then took up a Quart Pot of ſtrong *Mecklin* Beer, and drank it off. About 3 days after the Army march'd from *Roſebeck* to *Mount St. Andrew*, and he in a Waggon to *Tirlemont*: But next day, there being a Rumor that the Army was to engage, he came from *Tirlemont* to the Camp. His Captain asked him what he did there; he anſwered, *That he came to fight:* the Captain replied, *Sure you have enough of Fighting already*; *No*, ſays he, *I fear not Fighting now, and tho I was ſo lately wounded, and loſt ſo much Blood, I am as able to fight as any Man in the Regiment.* This Diſcourſe between his Captain and him he told me of on Sunday Morning, which was but five days after he was wounded. About three days after he was ſeen by his Majeſty and ſeveral great Officers, being then very well, and ſo continu'd till I left the Camp.

Experiment

Experiment VI.

A Privat Soldier, in the Regiment of Col. *Collingwood*, had with a broad Sword, his *Sternum* or Breast-bone divided; the Sword likewise past into the Body of his Lungs. From the Wound gush'd forth such a vast Quantity of Blood and Air together, that Mr. *Chomly* declared, he could scarce with his Hand keep on a Dressing; so to bring the Lips of the Wound together, with a Needle and Thred he sew'd up the Wound; but the Force of Air was so great, the Flux of Blood being before stopt by my Medicins, that he was forc'd to make his Stitches in the external part of the Bone, which is gristly, the Skin not being strong enough to hold them. The Man was for that Night attended with most dangerous Symtoms; but on the morrow, continuing to take the Tincture, they left him: He staid in the Camp three days very well, only weak with the great loss of Blood. The Army being to march, his Weakness was such that he could not walk far on foot; so, contrary to my knowlege, he was sent to the Hospital, but wanted no other assistance there, than to recover his Strength: He staid there som small time, but is since return'd to the Camp vigorous and well.

Experiment

Experiment VII.

A Privat Soldier, in the Regiment of Sir *James Leſley*, was alſo wounded in the Lungs; and Sir *James* himſelf told me he was by ſeveral Chirurgeons given over for dead. His Wound had bin a Fortnight or more receiv'd, and was in a very ill Condition: he had a great quantity of Blood diſcharg'd into the Cavity of his Breaſt, which lying there ſo long, vvas degenerated into the moſt ſtinking ſort of *Pus* or Matter; and had likewiſe a moſt violent Fever. Yet notwithſtanding his Condition vvas ſuch, by the repeated uſe of my Tincture, he was in 24 hours freed from his Fever, and had all the corrupted Matter thrown out of his Breaſt; and his Wound, by twice applying my external Medicin, in a week's time vvas cur'd.

Experiment VIII.

MR. *Wright*, a Quarter-maſter in the Regiment of Col. *Langſton*, vvas vvith a Sword run in juſt below the right Arm-pit; the Sword paſt thro the middle of the Lungs about ten Inches. He had immediatly a great Flux of Blood, both at the Wound and at his Mouth,

Mouth, vvith a great ſhortneſs of Breath, and violent Convulſions. Lieut. Col. *Morton* being at hand, and having ſom of my Medicins by him, ſent his Man for them; vvhich vvhen he had brought, he gave him Directions how to apply them. The Colonel told me afterwards, he never ſaw ſo ſudden, and ſo great an Alteration in any one in his Life: For that juſt before he took the Tincture, he had ſo violent Convulſions, and ſuch a ſhortneſs of Breath, that himſelf and all that ſaw him, thought him near expiring; but in a few minutes after taking it, thoſe Symtoms totally left him. But the poor Gentleman fearing ſomthing might be omitted, ſent for me; but I being otherwiſe buſy, ſent Mr. *Chomly* and Mr. *Hamſtead* to him, vvho found every thing vvell: but for ſecurity, Mr. *Hamſtead* ſtaid that Night vvith him, and in the Morning brought me vvord, that for the firſt part of the Night he vvas ſomwhat reſtleſs; but about two a Clock he began to ſleep, and continued ſleeping till he came away. That day I vvent to viſit him, and found him in a very good condition, free from a Fever, or any diſorder in or about his Wound; only he ſpit Blood a little, vvhich, I ſuppoſe, vvas occaſion'd by a Cough he had for ſeven Years before, vvhich being violent, beſides the ordinary Motion of his Lungs, muſt neceſſarily much impede the healing of 'em vvhen vvounded: Notwithſtanding vvhich, in four or five days he vvas

able

able to vvalk abroad, being very vvell, only vveak vvith great loſs of Blood. Six weeks ſince he vvas vvounded, I frequently ſaw him at *Ghent*, vvhen he told me, he vvas as vvell as he had bin for ſeveral Years.

Experiment IX.

A Soldier in the Regiment of the Right Hon. the Lord *George Hamilton* (now Earl of *Orkney*) being out a foraging, vvas vvith a Bullet, or rather tvvo, ſhot thro the back part of his Hand; the Bones of the *Meta Carpus* vvere all ſhattered to pieces, and the *Tendons* much torn, vvhich vve could plainly ſee, the Wound being ſo very vvide. It vvas firſt dreſt by Mr. *Willy*, Chirurgeon to Col. *Selwin*'s Regiment, being receiv'd about ten a Clock in the Morning. I being that After-noon at his Majeſty's Quarters, my Lord told me of the Accident, deſiring me to take care of the Man: Accordingly, about nine in the Evening, I vvent to his Tent, and ſent for Mr. *Willy*, vvho told me, that the Man's Hand, by the common Methods, could not be ſav'd; but if I could do it, he vvould ſtand my Friend againſt all Oppoſers: So I requeſted him to pull off his Dreſſings, vvhich vvere only Pledgets of dry Tow; vvhich having don, Mr. *Chomly* applied my external Medicin, and gave him the Tincture in a large Draught

Draught of *Old-hock*. His Hand and Arm vvere much ſwel'd and inflam'd, and he in moſt intolerable Pain. On the morrow I vvent again to ſee him, and found both Swelling and Inflammation gon, and he at eaſe. About four days after Mr. *Chomly* opened the Wound, to make a freſh Dreſſing, vvhich vve found in a very good Condition, and not in the leaſt digeſted, or brought to Suppuration: but a thin ſerous Matter, a little tinged with Redneſs, vvhich I ſuppoſe to be diſcharged out of the Glands and lymphatic Veſſels, came away, which when it had lain ſom time upon the Dreſſings, vvas ſubject to ſtink; but that which came freſh out of the Wound, was as ſweet as a Roſe: This Subſtance vvas quite different from vvhat vve call *Gleet*. The next time it vvas dreſt, it look'd better than before, and he could begin a little to ſtir his Fingers; at this Dreſſing (his Comrade next to be mention'd being alſo then dreſt) a great many Gentlemen and Chirurgeons out of Curioſity were by, vvho all declared they never ſaw any Wounds look ſo vvell in their lives; and then he could ſtir all his Fingers. Within a fevv days the Army began to march, and he vvalk'd every Day of the long March, unleſs it vvas the firſt, vvhen I got leave for him, and his Comrade in Affliction, to ride three or four miles. Before vve came to the end of the long March, he told me he could lay the vvounded Hand on the Back of a Horſe of 15 Hands

Hands high, and without any other assistance, leap upon his Back. He had at several times at least fifty small pieces of Bones came away; and after they were all discharged, his Hand was suddenly well.

Experiment X.

ANother Soldier of the same Regiment was at the same time wounded in three places of his Body. He had two Bullets, at about an Inch and half distance, enter'd near the middle of his Back on the right side, and were cut out by Mr. *Willy* about seven Inches from their Orifices on the same side. Another Bullet enter'd a little below on the same side, and was cut out just above the Navel, being about nine Inches from its first Entrance. Tho the other two had not, grazing upon the Ribs, yet I have great reason to believe this did penetrate the Cavity of the Body. This Man we found in most intolerable Misery, having a violent Fever; and the last mentioned Wound, in all appearance, began to mortify, both Orifices looking very black, and a very ill smell coming from them. Mr. *Chonly* applied my external Medicin, and gave him the Tincture, which, according to Custom, was repeated in five or six Hours. His Pain and Fever lasted about 30 Hours, when they both left him, and in three or four Days he walked abroad.

When he was next dreſt, which was about four Days from the firſt Dreſſing, the two firſt Wounds look'd very well, but the laſt not ſo well. But at the third Dreſſing there came out of the laſt Wound many Pieces of his Clothes, and that without any Digeſtion at all, only a great Quantity of the foremention'd ſerous Matter came from all the Wounds. In about 3 Weeks all the Wounds were filled with good Fleſh, and only wanted skinning; but being forc'd to march with the Army on Foot for many Days together, the great Motion of his Body, with the moving of his Clothes, fretted the wounded Parts, and kept them from skinning, and likewiſe caus'd a little proud Fleſh to grow up, which, when he came to have a little Reſt, ſoon vaniſhed, and the Wounds were preſently well.

Experiment XI.

AN Enſign in the Honorable the Lord *Belcaſtle*'s Regiment, in defending a Paſs againſt a Party of *French*, was with a Musket Bullet wounded in the Head; it entred a little below the Temple, paſt on, and tore the *temporal Artery* aſunder, and graz'd further on the Skull about four Inches. By his Majeſty's Order I went to take care of him; when I came, I found he had bin dreſt by the Chirurgeon of the Regiment, whom I ſent for to pull off

off his Dreſſings, which were hard Doſſels of Tow dipt in Spirit of Wine, he having cram'd the Wound, which was an Inch wide, with 'em as full as it could hold. After his Dreſſings were off, Mr. *Chomly* applied my external Medicin, and gave him the Tincture. His Head and Face were much ſwel'd, and he ſomthing feveriſh. On the morrow I went to viſit him, when the Swelling was quite gon, and his Fever left him; and in about a Fortnight, his Wound, tho ſo wide, without being brought to Suppuration at all, was perfectly well. In the mean time he never confin'd himſelf to his Tent, but march'd on Foot with the Army, and declared, that from the time my Medicins were applied, he felt no more Pain, than if he had never bin hurt.

Experiment XII.

A Privat Soldier in the Regiment of the Honorable Major Gen. *Le Mullinier*, was wounded at the ſame time with the foremention'd Officer; but of him I had no notice till the Morrow, when the Major General, I being at the Officer's Tent, ſent to me, deſiring me to take care of him. I found he had before bin dreſt by the Chirurgeon of the Regiment; for whom I ſent to pull off his own, and apply my Medicins, Mr. *Chomly* not being with me. The poor Man had one

Musket Ball enter'd at the corner of his right Eye, and passing thro the *Os Spongiosum*, or spungy Bone of the Nose, came out at the left Eye, tearing that all to pieces. Another Bullet enter'd at the last Orifice, past thro the upper *Mandible*, or Jaw-Bone, and came out at the corner of the under one. These two Wounds were cram'd as full as they could hold with hard Dossels dipt in Spirit of Wine, which I order'd to be pulled out: which tho perform'd with the greatest difficulty imaginable, and putting the poor Creature to most intolerable Pain; yet his Bravery of Spirit was such, that he never so much as smayed at it all the time it was doing. After the Chirurgeon had, as he said, pull'd out all the Dossels, I desired him to inject som of the Solution of my Pouder thro both the Wounds; thro the first it past very well: and tho we tried at both the upper and lower Orifice of the last, we could not get any thro; so I concluded there must be still som Dossels behind, as it afterwards appeared; but the Wound being very deep, he could not com at any of 'em with his *Forceps*; so we were forced to bind it up as it was. His Head and Face were swel'd to such a prodigious Bigness, that he look'd like a Monster; he had likewise a violent Fever, which by the taking of my Tincture was soon abated, and in two Days the Swelling of his Head and Face was quite gon down, and he free from any Pain at all, tho there were still

ſtill 3 large hard Doſſels left in the laſt Wound. About five Days after he was wounded, the Army began to march, and he on Horſe-back went the whole March; and tho expoſed to Wind and ill Weather, felt no Pain or Diſorder in or about his Wounds. About the ſixth Day of the March, Mr. *Chomly* having pull'd off the Dreſſings to make freſh ones, the Doſſels of the thickneſs of a Man's Thum came out at the upper Orifice of the laſt Wound, without any trouble or pain at all: At that time the lower one was almoſt clos'd up, and afterwards the upper one began to mend apace; in a little time his Wounds were cured, and he is now in this City very well, his Face not in the leaſt disfigured, only by the loſs of his Eye.

Experiment XIII.

MR. *Lorridg* a Lieutenant in the Hon. Brigadier *Lumley*'s Regiment, in a Rencounter receiv'd a ſlight Wound under the right Arm-pit, the *Axillary* Artery being alſo prick'd; on which enſued a large Flux of Blood, which was ſoon ſtopt, or rather pent in, by Mr. *Engliſh*, Chirurgeon to the Regiment. He was about a Month manag'd by Mr. *Engliſh*, and Mr. *Hall* principal Chirurgone to the Engliſh Hoſpital: After which he had a freſh Flux of Blood; and before he had

any Help, I ſuppoſe by what I ſaw in the Bed, and in his Breeches, he loſt 7 or 8 Pound of Blood: At laſt the Chirurgeon's Mate of the Regiment coming, with a very ſtrait Ligature ſtopt the Bleeding; and then ſent for Mr. *Hall*, who immediatly came, but ſeeing how the caſe ſtood, ſent for ſom of the moſt eminent Chirurgeons in *Ghent*, where the Lieutenant then was, to his aſſiſtance. They were at leaſt 5 hours uſing their utmoſt Endeavors to ſtop the Flux of Blood, which, tho they ſeveral times uſed red hot Irons, they could not do. At laſt Mr. *Hall* came to me, and deſired me to go along with him; which, tho I knew that on all occaſions he had ſpoken reproachfully of me, I readily granted. When I came, I found the poor Gentleman in a deplorable condition, his Arm being moſt prodigiouſly ſwel'd, and abſolutely mortified by their hard Ligature, from his Fingers ends to his Shoulder, and his Spirits ſo exhauſted by the loſs of Blood, and the intolerable Pain they had put him to, that it was impoſſible he ſhould ſurvive many hours: yet when the Ligature was never ſo little looſned, the Blood ruſh'd forth as violently, as I believe it had don at all. However, to be ſerviceable to an honeſt Gentleman in diſtreſs, in any manner I could, I prepar'd my external Medicin, which Mr. *Hall* applied; then I order'd the Ligature to be undon, and the Blood ſeem'd to be ſtopt: but in a minute, or therabouts, a

ſmall

ſmall quantity iſſued forth, which we concluded was occaſion'd by the Medicin's not ſufficiently coming to the Mouth of the Artery, which was ſo drawn up, the Artery being then totally divided, that the end of ones Finger would ſcarce reach it; but be it how it would, for ſecurity we pull'd off that Dreſſing, and made a ſecond, which totally ſtopt the Flux of Blood, without any Ligature or Compreſs at all. He lived about 5 Hours after; and tho he was very reſtleſs, and ſtrugled much, yet there did not one Drop of Blood more appear. I only mention this Experiment, to demonſtrate on what ſlight Occaſions many loſe their Lives by the common Methods, and how eaſily ſuch Accidents may be prevented, if my Medicins are timely enough, and regularly uſed; as in the caſe of this poor Gentleman: for had my Medicins bin uſed before his Arm was mortified by their hard Ligature, the Flux of Blood would eaſily have bin ſtopt; and then he could not, morally ſpeaking, have miſcarried.

Experiment XIV.

I Being at a Coffee-houſe in *Ghent*, Sir *Wil. Ruſſel*, a Captain in the Regiment of Col. *Coy*, came to me, and deſired me to meet him in the Afternoon at a Tavern, to look on a Man's Hand of their Regiment that was hurt, which I readily granted. According to pro-

miſe, I went, and found him and the Trooper together. After I had examin'd the Man about his Wound, which had bin receiv'd a Fortnight, his Hand and Arm being mightily ſwel'd and inflam'd, and he in moſt intolerable Pain, I deſir'd him to ſend his Comrade for the Chirurgeon, who had before look'd after it, which accordingly he did; but the Chirurgeon either would not, or was aſham'd to com. So, at his requeſt, I open'd the Wound my ſelf, which I found in a moſt lamentable condition, and beginning to mortify. The Sword enter'd about the middle of the Palm of his Hand, and came out at the top of his Wriſt, the two Orifices being about 6 Inches aſunder. The Wound being ſo very deep, I ſent my Boy for a Syringe, with which I injected ſom of the Solution of my Pouder thro the Wound, and afterwards gave him a large Doſe of the Tincture in a Glaſs of Wine. We had not ſat above a quarter of an hour, but the poor Man pul'd off his Hat, returning me Thanks in the moſt affectionat manner imaginable, ſaying, *Sir, when I came into your Company, I was in moſt intolerable Pain and Miſery, from which I was not to expect deliverance but by the loſs of my Arm; but am now as much at eaſe as ever I was in my Life.* This was about the 23*d* of *September*; and ſince my return to *England*, I received a moſt obliging Letter from Sir *Will. Ruſſel*, dated the 3*d* of *October*, wherin he tells me, that con-

contrary to his expectation, the Man's Hand was perfectly well.

I could add a great number of Cures wrought both in *London*, and other Parts of *England*, since the first publishing this Tract; but such as will not be convinc'd by those already menti-on'd, will not, should I add a hundred more.

Directions *for the use of the* Vulnerary Pouder, *and of the* Tincture *of the Sulphur of* Venus.

SUch a Quantity of the Pouder as will lie on a Silver Penny, may be dissolv'd in a full Spoonful of warm Water; where that cannot be had, you may take Urin. In this Solution you may wet a Pledget, made either of fine Tow or Lint, with which lightly dab the Lips of the Wound, and then squeeze a small quantity of the Solution into it. Then you may apply your Pledget, and bind it on. If the Wound be an incised one, after the Medicin is squeez'd into it, it will be convenient to stitch the Lips together with a Needle and Thred, and then apply the Pledget. Now in incised Wounds, when these Medicins are applied as soon, or a little after the Wound is received, one Dressing is for the most part sufficient, but two are as many as ever need be used; the second Application to be made at the end of 3 or 4 Days: But in Gunshot Wounds, or where there is great loss of Substance, more Dres-

Dreſſings are needful, and to be repeated once in about 4 Days. If the Wound be very deep, whether it be an inciſed or a Gunſhot one, inſtead of ſqueezing in the Solution, it is neceſſary it be injected with a Syringe.

As for the Tincture, in all very large fleſh Wounds, and thoſe within the Cavity of the Body, it ought to be taken once in 5 or 6 hours, and continued 4 or 5 days: The Doſe is half a Spoonful in a Draught of any good Wine, but *Old-Hock* I find beſt. In ſlight Wounds to be taken twice a Day for 2 or 3 Days: Tho if it be taken longer it can be no way prejudicial, but the contrary.

In great Fluxes of Blood it will be convenient to hold on the Pledget wet in the Solution with your Hand, till the Flux ceaſes, which in the greateſt Fluxes will generally be in a ſmall time; and afterwards to uſe very eaſy Bandage.

I have obſerved, that in thoſe Wounds where there is little or no Flux of Blood, the weaker the Solution is made, the better; and where there are large Fluxes of Blood, for the ſtopping of 'em the Solution muſt be made as ſtrong as may be: but after that is don, a weak Solution will ſooner finiſh the Cure than a ſtrong one.

Where there is only a *Cicatrix* wanting, or for the Cure of old Ulcers, I have found a ſmall quantity of the Pouder diſſolv'd in the White of an Egg (which it will immediatly turn into a ſtiff *Gelatinous* Subſtance) to do much better than when diſſolv'd in any other Liquor.

Novum

Novum Lumen Chirurgicum Vindicatum:

OR, THE

NEW LIGHT OF CHIRURGERY VINDICATED

From the many unjust Aspersions of several unknown Calumniators.

With the Addition of som few Experiments made this Winter, $169\frac{4}{5}$, in *England.*

By JOHN COLBATCH, *a Member of the College of Physicians.*

The Third Edition:

LONDON,
Printed by *J. D.* for *D. Brown*, 1698.

To the Honorable WILLIAM BLAITHWAYT, Esq; Secretary of War.

SIR,

MY Adversaries having dedicated a Piece to You, wherein they desire Your Patronage of Truth, which they pretend to be on their Side; I being likewise sufficiently satisfied that the Greatness of Your Soul is such, as not to be amused with specious Pretences, have presum'd also to dedicate this Tract to You: which, tho I have not had time to put into any Order, yet it contains most indisputable Truths.

I beg no other Favor of You, than that if Truth inclines to my ſide, You will afford me Your Patronage, which my own Experience is ſufficient to aſſure me, that my Requeſt will be as readily granted as deſired. I am,

SIR,

Your moſt obliged

and Obedient

Servant to command,

JOHN COLBATCH.

TO THE READER.

ON the 18th day of this instant April 1695, *there came to my Hands a little* Libel *set forth by my old Friends the Surgeons. At first I thought it would not be worth my spending any time in writing an Answer to it; till at last I concluded, That if I should be altogether silent till the end of the Campagn, they might in my Absence triumph amongst themselves, and make the unthinking Part of the World believe I had given up my Cause, and yielded all for lost. To prevent which, I have (in the midst of my Multiplicity of Business) spent a few hours in composing the following little Tract; which tho I must own to be full of many Imperfections, yet it contains nothing but Truth: and therfore for Truth's sake I doubt not but the Candid Reader will pass over those other Failings with which he may meet.*

The Charges laid against me are very numerous; and were they but as true, I must of consequence be the most vile Creature alive.

But

But I having bin used so much to the Scurrility of som of that Fraternity, there is nothing but I can bear from them. And indeed I should be to blame, if I was not content to give Losers leave to speak; and so much the more, by reason that their Diana *(I mean their ill Practices being detected, the World will be so wary as to have a care of them) is falling into Disgrace; to keep up whose Reputation (tho to the great prejudice of Mankind) they will not fail to make their utmost Efforts: A drowning Man will lay hold on every Twig. To be sure, if making a Noise, and using ill Language, will do any thing towards the Preservation of their sinking Credit, that shall not be wanting.*

As I have before said, so I say it again, That both the City of London, *and the* English *Army afford a great many Surgeons, who are Men of extraordinary Worth, from whom I have received many Civilities; and instead of being discouraged by them, I have bin to the utmost of their Power assisted in carrying on my Designs.*

I have had occasion to mention Mr. Bernard's *Name, which I could not possibly avoid: But I am so far from charging him with any thing unfair, that there is nothing more; for I can hear of no one person who has at any time heard him declare, That the Man*

Man at the Hospital bled again after my Pouder was applied, and had stopt the Flux of Blood. Nay, I have bin inform'd that he was altogether against the publishing of that scandalous Libel, telling the Authors, that it was in vain to write against Matter of Fact. Whether this Relation be true or not, I am not certain: But of this I am sure, he is a very great Man, and the Honor of his Profession; and I verily believe he scorns a mean Action. I heartily wish I could say the same of Mr. Cooper *and others, from whom I never deserved ill.*

There was scarce an Experiment I made last Year in Flanders, *but there were several Officers Spectators; so that if I had not perform'd what I pretended to, I must quickly have bin detected. But I thank God my Success was such, that I have gained the good Will of most Officers of the Army, whose Words will (I suppose) go further with all considerat Men, than the scandalous, malicious Reports of some interested Surgeons.*

Tho I have no immediat concern in the Medicins here recommended, yet my Reputation as much depends upon the Success or Non-success of them, as if they were still at my own disposal; and therfore I think I am obliged to acquaint the World, that the right ones are only to be had of Mr. Brown *the*

Bookseller, and Mr. Raddison, *the Persons deputed to dispose of them by the present Possessor.*

There are several Persons about the Town, who have endeavored to imitate these Medicins, and afterwards to sell them in my Name; but whosoever shall buy any, except of the Persons before mentioned, when they find themselves frustrated in their Expectations, I hope will not blame me, having given them this fair Warning.

From my House in *Villers-street, York Buildings.*

Novum

Novum Lumen Chirurgicum Vindicatum:

OR, A

VINDICATION of the *New Light of Chirurgery.*

THere having lately ſtoln into the World a ſcandalous Libel, intitul'd, *Novum Lumen Chirurgicum Extinctum*, wherin the Author, or rather Authors (I being very well aſſured, that it was compoſed by a Club or Cabal of Surgeons) pretend to ridicule notorious and known Matter of Fact; and he or they pretending to detect Impoſture, and to vindicate the Cauſe of Truth, I leave it to the impartial Judgment of any rational, ſober Perſon, whether the Author or Authors had any reaſon to conceal their Names. I confeſs there are the two initial Letters of a Perſon's Name prefix'd to the Title Page; which if they anſwer to the Perſon I have ſom reaſon to ſuſpect, had his Name bin written at length, his Life and Converſation are ſo very ſcandalous (he having laſt Year bin caſhier'd the Regiment to which he belong'd for his ſcandalous way of Living, as I have bin credibly inform'd by ſom of the Officers of the ſaid

Regiment) that it had bin ſufficient to have deter'd any one from reading more than the Title Page alone.

The Authors have taken care to ſend this Libel into the World at a time when I am full of buſineſs in making my Preparation for *Flanders*, and juſt upon the point of going, and therfore not capable of writing ſo full an Anſwer as otherwiſe I would have don, and which may be expected at the end of the Campagn; and alſo when the Officers of the Army, who would have bin my Compurgators, are gon out of Town.

Mr. *Hall*, Surgeon to the Honorable Col. *Fitz-Patrick*'s Regiment of Fuſileers, who had a conſiderable hand in writing this Piece, brings in the Major and two Captains of the ſaid Regiment to juſtify a moſt notorious Untruth; of which, when it ſhall com to their knowledg, I ſuppoſe he will have ſufficient cauſe to repent.

As for what they ſay concerning the Dogs wounded before the Right Hon. the Lord *Cuts*, and the Soldier wounded upon *Tower-Hill*; if I had time, I could ſufficiently make appear the Truth of every tittle I ſaid in my Preface on that Subject; and whoever will give himſelf the trouble of going to Mr. *Sterkey* Surgeon upon little *Tower-Hill*, will be ſatiſfy'd that the Man's Caſe was moſt deplorable, and quite contrary to what they relate.

They

They ſay I have deſerv'd ill of moſt Surgeons; which is no otherwiſe true, than if to be civil, and ſhew reſpect in the higheſt degree, be to deſerve ill. For I defy any one of that Fraternity to ſay, I ever denied them to ſhew what Experiments they deſired, and to let them ſee my Patients dreſt on all occaſions.

And ſince Mr. *Cooper* is by them trump'd up in relation to the Experiments made at St. *Bartholomew*'s Hoſpital, I ſhall repreſent that whole Buſineſs to the World, and leave it to any impartial Perſon to judg whether I was fairly dealt with, or not.

Having made ſom Experiments before Mr. *Cooper*, &c. firſt upon a Dog, making an Aperture in his *Abdomen*, then taking out one of his Small Guts, and wounding it, of which he was in 3 or 4 Days well; then cutting off one of his hinder Legs as cloſe as poſſibly we could to his Body, and immediatly ſtopping the Flux of Blood without any hard Bandage, to the great ſatisfaction of all the Byſtanders: I was deſired by one of the Maſter-Surgeons of the Hoſpital to try my Medicins upon two Perſons, who were to have the one a Leg, and the other an Arm cut off, which I readily granted. The Day before theſe Operations were to be performed, I receiv'd a Letter from the ſaid Maſter-Surgeon, requeſting me to com alone, and to bring no one with me, that a Croud might be avoided, and his Brethren not diſpleas'd, (which I leave to any one to

judg whether it did not look as if there was ſom Deſign, as the Sequel will demonſtrate.) Accordingly I went to the Hoſpital, having no one with me but my Boy of about 14 Years of Age. But (to my great ſurprize) when I came there, I found at leaſt twenty of their Fraternity. However, knowing the Juſtice of my Cauſe, I ſtaid to perform the Buſineſs about which I came. I confeſs my Pouder was two or three times applied before the Fluxes of Blood were ſtopt, but the irregular application of it by one of themſelves was the occaſion of it: And after the Fluxes were ſtopt, there was no other than mere retentive Bandage uſed, which is more than what any of them can pretend to with their moſt celebrated Medicins. After our Patients were dreſt up, and laid to Bed, we went all to the Tavern, where every one ſeem'd to expreſs great Satisfaction in what had bin don. The next Morning, being at *Tom*'s Coffee-houſe in St. *Martins-lane* with one Mr. *Clark*, I met with a certain Phyſician who told me that all was undon, for that one of the People had bled afreſh; and if Mr. *Bernard* had not bin at hand to have taken off mine, and applied his own Medicins, he had bled to Death. The Truth of which I had no reaſon to believe, having ſent one the Night before, and another that Morning, to make ſtrict enquiry how they did, who brought me word they were both very well, but mentioned nothing of any

ſuch Accident: However, that I might be ſatisfied exactly in the truth of the Report, I immediatly went to the ſaid Hoſpital, taking Mr. *Clark* with me. In our way we met Mr. *Blackſtone*, Apothecary to the Hoſpital, who told me the ſame Story the Phyſician had. When we came to the Bed where the Man lay, whom they ſaid had bled again; before I was capable of ſpeaking to him, he roſe up in his Bed, and prayed moſt heartily for me, telling me he believed no man, that ever had an Arm cut off, was ſo well as he: on which I ask'd him, whether he had not bled again after I left him; he reaching out his Stump to me, did ſolemnly proteſt, that thoſe very Dreſſings were the ſame that were put on in my preſence, and that they had not in the leaſt bin touch'd from the time I ſaw him. I likewiſe ask'd him how he had bin for Pain; to which he replied, That for 4 or 5 hours after the Amputation, he had ſom Pains occaſioned by an Inflammation juſt above the Stump; but that he ſlept well all Night, and was then perfectly at eaſe. We afterwards went up to the Boy, who told us the ſame the Man had don, ſaying he was perfectly at eaſe, and had ſlept well all Night. Som other Surgeons having ſaid the ſame thing in relation to the Man's bleeding, I deſired Mr. *Colbatch* a Stationer in *Cornhil*, and Mr. *Fiſher* a Surgeon in *Alderſgate-ſtreet*, to go to the Hoſpital, who being Strangers, the People would relate the whole Truth to them;

but instead of either of 'em owning they had bled, they declar'd they were infinitly oblig'd to the Person who made the new Experiment upon them, for that they were well to admiration. These Operations were perform'd (to the best of my remembrance) on a Tuesday; and the Friday following I was desir'd to be at the same place again, to perform the Operation upon another Person: but finding this ill Usage, I sent Mr. *Baker*, a Surgeon in *Suffolk-street*, who was wont to make my Experiments for me, with som other Friends, to be as Witnesses, and desir'd by Letter, that Mr. *Baker* might make the Application of my Medicins; but there being about six Witnesses of what might be don, they refused to let Mr. *Baker* do it, and defer'd it to another time. I likewise in the same Letter requested I might have notice given me, when the two before mentioned should be opened, that I might be present to see how the Stumps looked, which no body but will own was fair: But to be short, I was put off from time to time, and never admitted to see 'em at all. Now, if what I have said on this Subject argues not a Combination, I know not what dos; and for the truth of all, when I am at leisure, I will have it sufficiently attested before a Magistrate; nay the Man and Boy (tho reported to be dead) will both assist in confirming the truth of this Relation.

As for the Case of poor Capt. *Rogers*, I know nothing of it, but was told by one Capt. of Sir *James Lesley*'s Regiment, at *Man*'s Coffee-house, before Mr. *Baker* and others, that Capt. *Rogers* being open'd after he was dead, his Heart was found to be pierc'd. Whether he saw this himself, or heard it related by another, I am not certain; but he declar'd, on his certain knowledg my *7th* Experiment was true to a tittle, it being made on a Soldier of the Regiment to which he belonged.

As for Mr. *Dun*, I know no more than this, that he being in a Public Coffee-house, where there were at least twelve People, complain'd of two or three Wounds he had receiv'd by a Cock's Spur, and that there had bin somthing applied by another Surgeon; his Hand was much swel'd and inflam'd, and he in great Pain, and fear of som further ill Consequence: so he requested me to apply my external Medicin, which I did, and gave him som of the Tincture in Ale: in about a quarter of an Hour he declar'd before all the Company, that his Pain was altogether abated. On the morrow he came again, and desired me to make a fresh Dressing, which, finding his Hand like to be well, I refus'd, telling him one Dressing was sufficient. Now he being unaccustom'd to such sort of Methods, thought I had slighted him; and therupon applied himself to Mr. *Johnson*, who every body

body will allow, adviſed him to take off my Dreſſings, and make uſe of his; ſo what became of him after, I know not.

My time will not permit me at preſent to make Remarks upon the whole, for which however I ſhall take a convenient Seaſon: And the World may expect my full Vindication; for it is the Cauſe of Truth for which I contend, and therfore am not aſham'd to fix my Name to it. I confeſs (to uſe the Words of the Famous Mr. *Lock*) *the Imputation of Novelty is a terrible Charge among thoſe who judg of Mens Heads, as they do of their Perukes, by the faſhion, and can allow none to be right but the receiv'd Doctrins. Truth ſcarce ever carried it by Vote any where at its firſt appearance: New Opinions are always ſuſpected, and uſually oppos'd, without any other reaſon, but becauſe they are not already common: But Truth, like Gold, is not the leſs ſo, for being newly brought out of the Mine. 'Tis Trial and Examination muſt give it Price, and not any antic Faſhion: And tho it be not yet current by the public Stamp, yet it may for all that be as old as Nature, and is certainly not the leſs genuin.*

I did expect my Hypotheſis would have bin overthrown, and a better erected in its place, for which I ſhould have thank'd 'em; but inſtead of that, I find they have neither ſubverted mine, nor ſet up a new one of their own, but have ſtood at a diſtance and bark'd at me, ſhewing their Teeth, but either durſt not or could

could not com near enough to bite me in that place where I lay open to them. For as in building a Houſe, ſo in laying down a Hypotheſis, no Man can be certain, that he who coms after, cannot erect a better Fabric.

But for my Experiments, relating them as Matter of Fact, I am obliged to ſtand by them; and I defy all their united Force in the leaſt to overthrow them.

To the number of my Experiments, I ſhall add two or three made in *England*.

Experiment I.

A Servant belonging to Mr. *Norris*, a Member of Parlament for *Leverpool* in *Lancaſhire*, driving a Cart, by accident fell down before the Wheel, which running over his Head, divided the Scalp from off all the hinder part of it; and, as Mr. *Norris* ſaid, the Scull was altogether as bare as if ſcrap'd with a Razor, for the breadth of 3 or 4 Inches; his lower Lip (by a Splinter, or ſom ſuch thing) was divided the length of an Inch or more. The Man was preſently brought into Mr. *Norris*'s Houſe, who ſays, he was the moſt miſerable Spectacle he ever ſaw; but having ſom of my Medicins by him, he gave his Maid Directions how to uſe them. She made a Solution of my Pouder in Water, and with it waſh'd the Scalp and Scull to free them from

from Dirt and Sand that were lodg'd upon them; then she laid the divided Scalp on its proper place, and bound it up; then stitch'd up the Lip, and made an Application. Mr. *Norris* has several times publicly declared in the *Grecian* Coffee-house in *Essex-Buildings*, that in 4 days both the Man's Head and Lip were perfectly well. He likewise said, that the Flux of Blood was so great, that he believes the Man could not have lived, whilst they sent 3 Miles for a Surgeon, unless my Medicins had bin applied. He says the Curiosity of the thing was such, and the Cure so speedy, that it drew a great many Surgeons of the Country therabouts to see the Man, and to be inform'd exactly of the Wounds, and the manner of the Cure; who all declared, they did not believe there had bin such a thing in Nature, and that if they had bin sent for, they could not have told what to have don. If Mr. *Norris* be gon out of Town, there are many Gentlemen who frequent the *Grecian* Coffee-house, that have heard him relate this thing, and can testify to it. I must beg Mr. *Norris*'s pardon for using his Name, without first asking leave; but since I was oblig'd to it in vindicating Truth, I hope it will be the more easily excused.

Experiment

Experiment II.

Perform'd by Mr. Baker *at my Order, which compar'd with the* 13*th Experiment in my* Novum Lumen (*I ſuppoſe*) *confirms the truth of what I there ſay.*

ON the 8*th* of *March* in the evening, I was ſent for to one *Roger* , a Corporal in the Company of Capt. *Armſtrong*, in the Regiment of Col. *Tiffany*. Mr. *M.* a Surgeon in *Bloomsbury* was then with him, who had dreſt him from the time the Wound had bin receiv'd, which was about 11 Days before, it being given with a large Bagonet Sword. It enter'd about the middle of the Leg, between both *Focils*, glancing on the *Tibia*, and ſo paſſed on, and went almoſt thro: For the Point of the Sword made a ſort of Tumor in the Calf; it wounded the Artery, but that lying very deep, the Flux of Blood was not violent. He dreſt it that time, and ſo on for about 5 Days, it bleeding now and then, but not much; in which time the Wound was much enlarg'd; for at firſt he could not have put in above 4 or 5 Doſſils, but then 20 perhaps or more, as both Mr. *Armſtrong* and all the Family told me. On the fifth day it bled with that Impetuoſity, that it frighted the whole Family:

ly: He ſtopt, or rather pent in the Blood with good ſtore of Doſſils and tite Bandage. It continued bleeding thus at times for many days; in which time (as the Family told me) he loſt about 12 or 14 Pints of Blood, even ſo much, that he look'd like a perfect *Skeleton*; his Hands were ſhrivel'd, and as yellow as a Hawk's Foot. But on the 11*th* day after the Wound was inflicted, he bled again with the greateſt Violence imaginable, which was the reaſon I was ſent for. When I came, Mr. *M.* asked me whether I thought I could ſtop the Flux of Blood. I anſwered, I hope I can: For he had declared before, that nothing but Amputation could ſave his Life. He then open'd the Wound, pulling out moſt of his Dreſſings; the Wound was ſo large, that 4 or 5 Fingers would eaſily have gon into it. The Dreſſings were not all pul'd away with Mr. *M*'s *Forceps*, but the Blood roſe in a moſt violent manner: I can liken it to nothing but to a Hole dug in the Ground (of about two Foot Diameter) over a Water pipe, in which, if you bore a large Hole, after the Ditch is full to the Brims, and runs over, the Water boils up in the middle ſomwhat high; juſt ſo did the Blood. I put my Forefinger into the Wound, could feel both Bones very plain (but not the bottom of the Wound) with the violent Pulſation of the Artery; I really believe the Artery was almoſt, if not totally divided. The Leg was ſwell'd to the higheſt de-

degree, the Blood being extravaſated, and filling up the *Interſtices* of the Muſcles (having bin ſo often, both by too tite Bandage and Doſſils, pent in as it were by main force, till the greater force overpowered, and made its way thro all) ſo that beſides the often Bleeding, nothing leſs than a Mortification was to be fear'd. But having made my Application ready, I injected ſom of the Solution of the Pouder into the Wound, but it was waſh'd away by the Impetuoſity of the Flux before it could arrive to the wounded Artery: However, with ſoft Pledgets dipt in the Solution, I dreſt it up for that time, and the Flux ſeem'd to be ſtopt; yet it bled ſomwhat that Night, but with no great violence, and ſoon ſtopt again. It did ſo twice or thrice, ſo that I was ſatisfied, unleſs I could empty the Wound of the Blood, and com to apply the Medicin to the Artery it ſelf (the Caſe being quite different from what it had bin, had the Wound bin a freſh one, the Parts being all perfectly rotten, as will appear by the Sequel) I had little hopes of ſtaying the Flux; on which I made uſe of the *Turnicat*, compreſſing the Veſſels in the Ham, which retarded the impetuous Courſe of the Blood; ſo I emptied the Wound as much as I could, and applied the Solution with a Pledget to the very Artery, and filled the reſt with ſoft Tow, uſing no Compreſs, only retentive Bandage. He had little or no Pain from the firſt time theſe Medi-

Medicins were applied, except a little tenſive pulſific Pain before the Flux was totally ſtopt. After this Application, not one Drop of Blood appeared, nor did it ever bleed afterwards, tho I dreſt him not in 5 or 6 Days; but in the mean time the Swelling abated, and from the Wound was diſcharged a quantity of coagulated, corrupted Blood. I continued dreſſing him with the ſame Solution only 4 or 5 times, in which time he was remov'd from his Maſters Houſe in *Southamton-ſtreet*, *Bloomsbury*, to a Nurſe's near *Soho-Square*. The Day after his Removal I dreſt him, and with the Cloth applied over the Wound there came away a large Core made up of the contuſed rotten Fibers, coagulated Blood, and ſom Doſſils which Mr. *M.* had left in the Wound; this was about 3 weeks after I firſt ſaw it. The Wound within look'd very ruddy and well, but the ſide of the *Tibia* or Shinbone (by which the *Muſculus Anticus* lies) was bare, without any *Perioſtium*, about two Fingers in length. There was an extraordinary Cavity after the Core was diſcharged, and much Matter of a very ill ſmell, which obliged me to dreſs him oftner than uſual; this Matter was the extravaſated Blood, pent up long between the Muſcles, which in this time had form'd for it ſelf ſom Chambers. Yet in three days the contain'd Matter was all com away, the Leg fallen to its wonted Bigneſs, ſo that you might preſs every Part without any pain. All this

while

while I never put in a Pledget, only ſqueez'd in the Solution, and ſpread the Pledget over, covering it with a clean Linen Rag, and the former retentive Bandage. During which time I uſed nothing but the ſaid Solution to the diſcovered Bone, which were it a Cauſtic, what pretty work would it have made? Afterwards I dreſt him not above once in 5, 6 or 7 Days; he daily recover'd Strength, ſo that he roſe, and by degrees walk'd with a Stick, the great Cavity being very faſt, full of Fleſh, the Bone hid; and by the 20*th* of *April* he was quite well. But this is remarkable, that in the beginning of the Cure by me, he took every day the Tincture in White-Wine or Claret, a Quart or three Pints a day, yet never was in the leaſt feveriſh, tho at the ſame time he had no Stool for 11 Days, but always ſlept well, and gain'd Strength.

I mention nothing here to derogate from the former Surgeon, who every one will allow deſerves well in ſending for Aſſiſtance when he was put to a Nonplus.

ROBERT BAKER.

Experiment III.

January 14, 169⅘, *David Hunter*, Waiter at the *Roebuck* Tavern in Great *Suffolk-ſtreet*, in a Scuffle receiv'd a large Wound quite croſs the *Carpus* or Wriſt, in which the Artery was wounded, and two of the Tendons of the *Flexores Digitorum*, or Muſcles which move the Fingers, quite divided. Their Extremities were ſeen by all By-ſtanders. Within an hour after the Wound was given, I was ſent for; it had bled much: but what with Napkins kept cloſe on, together with the coagulated Blood, the great Flux was in ſom meaſure check'd. When I came in, I found a Dutch Phyſician there, who tho I propos'd to ſtitch up the Wound, would by no means have it don; ſo I dreſt it only with the Medicins commonly uſed by us Surgeons, and bound it up: But at Midnight I was alarm'd, that he was bleeding to Death. I made all the haſte I could to him; when I came, I found him fainting, and having great Convulſions. I found two Chamber-pots of Blood he had loſt, before I could com to him, beſides what was loſt on the Ground, Sheets, *&c.* I preſently put my Thum on the Artery, which beat and bled with that Violence, that it almoſt threw it off; and tho I made ſeveral Applications of the beſt common Reſtringents,

I

I could not in the leaſt ſtop the Flux; wherupon I ſent for ſom of Dr. *Colbatch*'s Pouder I had at my Houſe, having forgot to take it with me. When it came, having no Water by me, I mix'd it with the White of an Eg, and with a Pledget of Lint applied it to the bleeding Artery, and another the whole length of the Wound, uſing only moderat Bandage juſt enough to keep on the Applications. In a moment the Flux of Blood was intirely ſtopt, and he ſlept well all Night; but the next Day he was a little in pain; ſo I took off the Roller, and juſt lifted up one of the Pledgets, from under which came away about half a Spoonful of extravaſated Blood, which had bin pent up by the glutinous Quality of the White of the Eg. After the diſcharge of which he was preſently at eaſe. I open'd it not again till 4 days after, at which time the ſame Dutch Phyſician, and two Engliſh Surgeons my Friends were by; when to the great Amazement of us all, the Artery was quite hid, the Extremities of the divided Tendons not to be ſeen, and the whole Wound incarned, ſo that only Cicatrization was wanting. In 15 days he was well, and had the uſe of his Hand as well as ever in his Life; and the Pouder was but twice applied.

ROBERT BAKER.

A

Physico-Medical

ESSAY

CONCERNING

ALKALY and ACID,

SO FAR

As they relate to the Cause or Cure of DISTEMPERS.

WHERIN

Is endeavored to be prov'd, that *Acids* are not (as is generally and erroneously suppos'd) the Cause of all or most Distempers, but that *Alkalies* are.

WITH

An Account of som Distempers, and the Medicins, with their Preparations, proper to be us'd in the Cure of them.

AS ALSO

A Short Digression concerning *Specific Remedies*.

By JOHN COLBATCH, *a Member of the College of Physicians.*

The Third Edition with som Additions.

LONDON,
Printed by *J. D.* for *D. Brown*, 1698.

To the Right Honorable

Sir HENRY BELLASIS,

Lieutenant-General of His Majesty's Forces.

Honored Sir,

DEdications are now so much in fashion, that a Book which appears without one, is scarce look'd upon; People thinking the Author, who omits what is so generally practis'd, is altogether destitute of a Friend capable of protecting and countenancing him; for which reason only, let the merit of the Book be never so great, few will give themselves the trouble of reading more than the Title-page. To prevent which, and thankfully to acknowledg the manifold Favors you have generously confer'd upon me, I have presum'd to prefix your Name to this Essay. I can't flatter my self so far as to think any thing in it worthy to

entertain a Perſon of your parts: But ſince it coms from one fill'd with a ſenſe of Gratitude, I have reaſon to hope it may meet a kind Acceptance; well knowing that ſmall things have ſomtimes a Value ſet upon them, eſpecially when made the Offerings of Reſpect, Eſteem, and Thankfulneſs. It would be too great an Honor to me to declare how readily you have appear'd to ſerve me when I ſtood moſt in need of your Aſſiſtance: For which I can't better expreſs my Gratitude, than by a Silence full of Admiration; and let me ſay never ſo much, I ſhould fall ſhort of my Duty. This Piece is properly Yours, it being under your Umbrage I was inabled to write it. And if, out of your wonted Generoſity, you'l be pleaſed to caſt a favorable Aſpect upon it, it will afford the greateſt Satisfaction to,

Honored SIR,

Your moſt oblig'd
and obedient Servant,

JOHN COLEATCH.

The PREFACE.

IT may be much wonder'd, that I ſhould in the leaſt preſume to meddle with this Subject, which has already bin handled by ſo many Great Men. But when it ſhall be conſidered, in how different a manner I have treated upon it from what has bin hitherto don, I queſtion not, but by the generality of Mankind I ſhall be very eaſily excuſed: And tho there may be many imperfections in it, yet when my Deſign (which is to undeceive people in a matter, on which depends the Health and Welfare of all) ſhall be well weigh'd, I doubt not but by the candidly Ingenuous it will be well approved; tho I expect to meet with a great number of Carpers, eſpecially among thoſe, who by long cuſtom, and for want of due Conſideration, have embraced a contrary Opinion.

It is ſcarce poſſible for a Man to converſe with Perſons that are ill, let the Diſtemper be what it will, eſpecially ſuch as have any ſmattering in Phyſic, which moſt now a days have, but they preſently tell you, their Blood is ſo very acid, that unleſs the Acidity can be corrected, it is impoſſible for 'em to be well: And accordingly they fly to Alkalious Medicins, as Pouder *of* Pearl, Coral, Crabs eyes, *or ſomthing of that nature: and if they ſend for a Phyſician, which few do, eſpecially in* Chronical *Caſes, till they have firſt uſed a vaſt* Farrago *of Alkalious Medicins, and he chances*

chances to take the same Method with themselves, they presently cry out, We have already taken such vast quantities of the foresaid Medicins, that unless you can think of more generous and efficacious Alkalies, the Acids complain'd of will not be mortified. This has put men to great shifts, either to find out new, or to disguise the old ones: and after all, the Patients Expectation has bin frustrated, their Distempers not being to be cured by such Medicins; but on the contrary either exasperated, or so confirmed, that they will scarce admit of a Cure at all, especially if the Distemper be Chronical.

I must confess, I was formerly a Stickler for Alkalies *(being carried away by the common Vogue of Mankind) and seeing the insufficiency of common ones, did put my self to great expence, besides a vast deal of trouble, to volatilize Salt of Tartar,* &c. *till at last I was fully satisfied, by daily observation, that Alkalies, tho never so exalted, would do me very little, if any service at all in the cure of most Distempers.*

There are som particular Preparations of Steel *and* Antimony, *of som of which I have given an account; which using as Alkalies, as they are generally believ'd to be, did me great service. But since I have well examined 'em, instead of Alkalies, I find 'em to be most noble Acids, and the Distempers cur'd by 'em did not (as I formerly supposed) proceed from an abundance of Acid Particles in the Blood or Juices;*

ces; but on the contrary from Alkalious ones, as I ſuppoſe moſt Diſtempers do, and as I have endeavored to make appear by many Obſervations.

I expect many will cry out, as ſom have already don, That this Man was bred an Apothecary; and ſhall he pretend to be a Reformer in Phyſic and Surgery?

To which I anſwer, That I own my ſelf to have bin an Apothecary, and bred up under a Man (tho otherwiſe very honeſt and juſt) that was not the greateſt Maſter in his Buſineſs. Taking notice of his Imperfections, I applied my ſelf for four Years of my time to diligent Study, in order to attain thoſe things I was ſenſible he could not teach me. And after I had well conſidered, and in ſom meaſure becom a Maſter in Pharmacy, *which is the Foundation on which the Practice of Phyſic is built, I was induced to look into the Body of Phyſic it ſelf; and tho I don't pretend to abſolute Maſterſhip, yet I ſhall endeavor, and think my ſelf obliged in Duty both to God and Man, to improve my ſmall Talent to the beſt advantage I can, let Carpers ſay what they will.*

The greateſt part of my time I lived in Worceſter; *and tho I kept an Apothecaries Shop, yet my Dependence was wholly on my own Practice, the Succeſs I had in which is ſufficiently known in that Country. And for a Character, I deſire no other than the generality of thoſe People will give me, of whom I know no one that can or will ſpeak amiſs of me for any thing, but my coming*

away

away from them, and leaving such flourishing, thriving Business as scarce any of my Age ever had before; for which many of them have blam'd me: but the Reasons of my leaving that Place are best known to my self; nay, are now in som measure evident to the World.

And since I have bin speaking of my being bred an Apothecary, I shall inlarge a little on that Subject, giving a short account of the necessary Qualifications of one of that Profession; and then leave every body to judg whether a Man so qualified has not made a large step towards being a good Physician.

First, An Apothecary must be well acquainted with the Vegetable *Kingdom, not only to know the faces of Plants, but their Natures, and manner of Operation on Human Bodies: Can he otherwise tell how to handle them, so as to make his Compositions as they ought to be? And indeed every Physician supposes the Apothecary so qualified, when he prescribes to his Shop; for in his Bill he seldom directs the Method of making his Medicins, but only orders such and such Medicins, knowing, or at least supposing him (for every Physician ought to be well satisfied in the Abilities of his Apothecary) to be before hand skilfully prepar'd. For let a Physician prescribe like an Angel, if the Apothecary thro Ignorance be destitute of good and well prepared Medicins, both Physician and Patient are frustrated in their Expectations, which I am afraid too frequently happens.*

Secondly,

Secondly, He must well understand the Nature and Operation of Minerals *and* Metals, *which is not to be learnt in the* Dispensatory, *nor any other way to be attain'd, but by much reading, and hard labor in the Fire.*

Thirdly, He must understand the Nature of Animal Bodies *also, among which is comprehended that of* Man, *of whose Body there is scarce a Part, but is somtime or other to be used as Medicin: yet before it is used, the Apothecary's Skill is for the most part required for its Preparation, in order to which he ought first very well to understand its Nature.*

With all the foresaid Qualifications, and many more, are multitudes of Apothecaries in England *endow'd. And to the Honor of the Apothecaries of* London *be it spoken, I have generally found the meaneſt Shops in this eminent City better fraited with good Medicins, than the most eminent in all* Holland, *or the rest of the* Low-Countries.

I might add much more on behalf of that noble Profession; which tho I have left off, yet still I have a high value for it, and think an honest and skilful Apothecary as serviceable in the Commonwealth, and to deserve as much Incouragement as any man whatever.

The Famous Etmuller *was not asham'd to own, he serv'd 8 Years to an Apothecary; for all which he was afterwards one of the eminentest Physicians of* Europe: *And for ought I know, the loss of him at the Age he died, from whom so much*

might

might rationally have bin expected, deserves as much to be lamented, especially by Physicians, as the loss of any one privat Man.

And here let me lament the great misfortune under which the Commonwealth of Physic at this time labors, viz. *the great Breach between Physicians and Apothecaries, or at least a great number of both Professions; which, unless som Method be found amicably to compose it, and to establish the antient Friendship and Correspondence between the two Professions, will be such an Opportunity to the Quacks, that in time they will destroy both Professions, and have liberty to injure Mankind without controul.*

I believe there are more strowling Quacks in this Nation than in all Europe *besides, who have nothing to recommend them but their Impudence: and the Common People who are not Judges, are easily imposed on by them; yea, 'tis daily seen, that on the Ruin of Families many of them raise considerable Fortunes, and make a Figure in the World.*

Now the only Method I can propose to suppress these Swarms of Caterpillars, is a hearty Union between the College of Physicians, and the Company of Apothecaries; for want of which Mankind daily suffers detriment.

I have not given a full account of those Distempers I treat of, but only som short hints so far as was necessary to clear my way.

In the following Essay there are Remarks on the Practice of som particular Men only, my Design

ſign not being in the leaſt to reflect on that Noble Society, or any Member of them, I mean the College of Phyſicians, whom I own to be the Glory of our Nation, and of the whole World, and for whom I have the greateſt Reverence and Reſpect imaginable. And ſince I had the Honor to be admitted into their number, and therby of having more intimat converſe with them, I ſee more cauſe to eſteem and reſpect them every day.

I pretend not to be the ſole Author, or firſt Broacher of this Doctrin of Acids *in the cure of Diſtempers, it having long ſince bin the Opinion of ſom of the moſt happy Practitioners in the World, and is at this time imbraced by as great Men as perhaps our Age affords.*

I wrote this Eſſay at a place (during the firſt three Weeks of the Siege of the Caſtle of Namur, *when we had not many wounded Men brought to our Field-Hoſpital) where I had not the opportunity of conſulting Books, nor the benefit of coming at my own Papers, wherin I had ſet down my Obſervations on this Subject: For want of which I have only us'd ſuch as occur'd to Memory, wherby they are not ſo numerous nor exact as I deſign'd them: But however, for ſom reaſons I am willing to venture them abroad as they are, they not being in the leaſt deſigned to entertain the Learned, but to undeceive the Multitude.*

I don't pretend to be ſo great, nor to deſerve ſo well of Mankind as Helmont, Paracelſus, *&c. yet they going out of the common Paths, and acting on different Principles from the reſt of Mankind,*

kind, did not want such as maligned them, and used all opprobrious Language against them. Therfore why should I, who have not in the least arrived to those great Perfections that they had, take it amiss to be abused and evil spoken of?

[*I must confess I have differed from the forementioned great Men in this,* viz. *that I have deliver'd my Mind in so clear a manner, that all might understand what I write; wheras they endeavored to conceal many great things even from their dearest Friends and Relations, wherby the World is now deprived of som Medicins that might have bin of great advantage to the diseased part of Mankind.*]

Authority has in great measure blinded som Mens Understandings, and seal'd up their Eyes: There being still som that pay too submissive a Deference to antient Opinions, tho never so contrary to Reason, and will not open their Eyes to see the Truth. There are still Men who write against most known Truths, as the Gravity and Elastic force of the Air, and other such things. This Doctrin of Acids, *and that I formerly wrote concerning the Cure of Wounds, are likewise of the number of those that are unfortunat, merely for not being born old, and with a venerable Beard.*

When a Book (says the famous Malbranch) *is first to appear in the World, we know not whom to consult to know its Destiny: The Stars preside not over its Nativity; their Influences have no operation on it, and the most confident Astrologers*

logers dare not foretel the divers Risks of Fortune it must run. Truth not being of this World, Celestial Bodies have no power over it; and wheras it is of a spiritual Nature, the several Positions or Combinations of Matter can contribute nothing either to its Establishment or Ruin. Besides, Mens Judgments are so different in respect of the same things, that we can never more hazardously and imprudently play the Prophet, than in presaging the happy or unfortunat Success of a Book. So that he who ventures to be an Author, lays himself at the Reader's Mercy, to make him what he pleases. But of all Authors, those who encounter with Prejudices, ought infallibly to reckon upon their Condemnation. Their Works sit too uneasy upon most mens Minds; and if they escape the Passions of their Enemies (which I have not) they are obliged to the almighty force of Truth for their protection.

However, time will do every man Justice; and Truth, which at first appeared a chimerical and ridiculous Phantasm, by degrees grows sensible and manifest. Men open their Eyes, and contemplate it; they discover its Charms, and fall in love with it.

The Books that encounter with Prejudices, leading to Truths thro unbeaten Paths, require a longer time than others to obtain the Reputation their Authors expect. And I find it too true, that all those Writers who combat with Prejudices, are much mistaken, if they think therby to recommend themselves to the Favor and Esteem of others.

Possibly a few will speak honorably of them when dead. But while living, they must expect to be neglected (I speak experimentally) by most people, and despised, reviled, and persecuted even by such as go for the wisest and most moderat men. There is nothing but Truth contain'd in my Novum Lumen Chirurgicum; *and I thought I should have bin in a condition this Summer to have made it evidently appear. But instead of that, I have bin abused and delivered up into the hands of my Enemies, to do with me as they pleas'd.*

My Novum Lumen *is built on a pair of Medicins, which as yet I think not fit to make public; but here lies my misfortune common to all those who make new Discoveries: A great many believe the truth of what I have said, and that my Medicins are capable of performing what I have promised. But among those who are so ingenuous as to believe matter of Fact, many say, this Man was not the Author; others, that they have the same Medicins; and som, that they imparted them to me. As for these Gentlemen, I can easily excuse them, well knowing it is the nature of most Men not to allow any Person the honor of his own Discoveries, thinking therby their own Glory eclipsed. But there are another sort, whose Interest will not let them embrace the Truth, and for that reason do what in them lies to keep others from so doing. And the greatest part of Mankind not being Judges in my Cause any further than their Eyes direct them, it is altogether impossible there should be many Spectators, by which means*

means I am evil spoken of by many, because an interested Party has told them I have pretended to what I can't perform.

I expect the Mouths of my Enemies will be opened wide against me; but I have already born so much, that I can contentedly suffer the greatest Indignities that may be offer'd: My great Satisfaction being that I have Peace in my own Mind, having proposed nothing but what tended to the good of Mankind; and well knowing, that if my Medicins are faithfully and skilfully used, they are capable of performing much more than I have promised for them; but the best Medicins unskilfully used, or by prejudiced Persons, with a design they should not succeed, may be brought into disgrace.

The following Essay I humbly offer to the candid Reader's Consideration, not doubting it will meet with a favorable reception. I must needs say, I more value the good Word and Opinion of one candidly ingenuous, than all that can be said by ten thousand clamorous, ill natur'd Persons. I have endeavored to act so, as to deserve no Man's ill Word; but if I am abused, and my Undertakings misrepresented without just cause, I shall never break my Heart about it, being assur'd the Justice and Integrity of my Undertakings will one time or other appear.

There being a great Call for this little Tract, and the former Impressions being quite sold off, at the request of my Bookseller I have suffered this third Edition to com abroad: The Additions I

have made are not many, tho I could have added much more; but the Bookseller designing to print this and som other Tracts together, if I should have added much, it would have swelled to a larger Extent than is designed.

Were I satisfied that any one thing I have advanced either in this, or my other Tracts, did in the least tend to the prejudice of Mankind, the first thing I went about should be to recant, and beg pardon of the World: but instead of that, I am daily more satisfied and confirmed in the truth of my Hypothesis, both by the Success attending my own Practice, and the concurrent Testimony of Multitudes of Practitioners from most parts of England, *who have bin so generous as to return me Thanks for making them sensible of their Errors, and setting them on a right Bottom, wherby they are capable of acting with som Certainty, which before they could not do: For whose sake, tho I meet with never so much Opposition from others, I will spare no pains to make things yet more clear.*

From my House in *Villers-street, York Buildings.*

A Physico-Medical ESSAY, &c.

CHAP. I.

Of the Small Pox.

THE first thing I shall begin with, is the Disuse of *Alkalies* in the *Small-Pox*, that fatal Distemper to three Kingdoms, and even all *Europe*; in that God was pleased therby to deprive us of a Princess, whose Worth was such, that a sufficient Value can never be set upon it, nor her Loss be enough lamented.

It is common both with Nurses and the generality of Practitioners, as soon as they perceive the least Symtoms of this Distemper, to give *Gascoin*'s, *Countess of Kent*'s, *Lapis de Goa*, or som other *Testaceous* Pouder, which are known Alkalies. The one Party pretend therby to drive the Malignity from the Heart; the other to correct the Acidity which they conjecture (beyond which they can't go) to be in the Blood.

In the subsequent Discourse, I shall endeavor to shew on what false Suppositions both Parties go.

For the first sort it will not be worth while to spend much time, because every one will readily grant, they generally act on wrong and mistaken Notions. And as for any Malignity lodg'd in the Heart more than in any other part, 'tis altogether impossible, by reason the Blood moves ten times at least faster thro the Heart than any other part, the Lungs excepted: And the Cavities being large, no *Stagnation* is to be feared, and consequently no danger. If there be any fear of the Malignity's setling any where, it must be in those parts where the Vessels are very small, and the Blood moves but slowly, which must be near the extreme Parts.

For the second sort, who give the same Medicins, but with quite different Intentions; I shall endeavor to prove, that their Suppositions are altogether as groundless as the former. They give their *Alkalious* Medicins to correct the *Acidity* they suppose to be in the Blood, which is, as they pretend, the occasion of all the ill Symtoms that attend the Small-Pox. Now I could never hear of any one, that by analyzing the Blood of Persons in the Small-Pox, could ever find the least Footsteps of Acidity in it; tho, on the contrary, it appears after many Trials, that the Blood of such abounds more with Alkalious Particles than that

* of

of ſound People: and conſequently, the giving Alkalies in this caſe muſt be at leaſt ſuperfluous, if not highly pernicious, as I have frequently obſerv'd, and ſhall inſtance in ſom Particulars.

The cauſe of the Small-Pox, common with moſt other Fevers and acute Diſtempers, I ſuppoſe to be from a quantity of ſuch Particles being ſom way or other admitted into the Blood, which being of a quite different Texture from the Blood, and ſo not capable of mixing with it, cauſe a hurry and diſorder there; which is what I * elſwhere obſerve to be the occaſion of both continued and Symtomatic Fevers. Now it is well known a Fever always precedes the Eruption of the Puſtles in the Small-Pox: And when the Puſtles are well com out, that is, when the heterogeneous Particles, or ſuch as are of a different Texture from thoſe of the Blood, are thrown out to the Surface of the Body, the Fever ceaſes.

**Nov. Lum. Chir.*

Now to aſſiſt Nature in throwing thoſe heterogeneous Particles out of the Blood to the extreme Parts, which they pretend to be mightily hinder'd by a great quantity of Acids in the Blood, they give repeated and large quantities of Teſtaceous Alkalious Pouders, and other *Diaphoretics*; which indeed ſeldom fail of anſwering their Intentions, in throwing out large quantities of Puſtles, even more than Nature is able to ſupply or bring to maturity;

and if she chances to cope with 'em, 'tis the only occasion of spoiling so many Angelic Faces, as we daily observe. But the spoiling of Faces is not all, for besides the throwing out so great a quantity of Pustles by breaking the Globules of the Blood, when brought to the *Cutaneous* Glands, instead of those Glands separating the excrementitious *Serum*, which in a state of Health is all or most part of it carried off by Sweat, or insensible Transpiration, but at this time to supply the Pustles till brought to maturity; I say, by breaking the Globules of the Blood when in its confused state, Serum and all together, the excrementitious Serum only, according to the Rules of Nature, ought to be separated, those Glands being so many Strainers fitted to receive into them the Serum only, and not the least drop of Blood when in its natural State, and its Globules unbroken. I can liken the separation of the Serum from the Blood, by the mediation of the cutaneous Glands, to nothing better than a Mixture of Oil and Water, made by continued agitation, when that compound Mixture seems to be one intire white Liquor; tho with good Eyes or a good Glass, the Oil may be seen floting in the Water in small Globules, as the Blood doth in the Serum, as I elsewhere *obserye: Yet this Mixture of Oil and Water, let it be don never so exactly, if pour'd into a Funnel lined with brown Paper, wet beforehand, the Pores will be so disposed, as to let

*Nov. Lum.

all

all the Water run thro, tho not the leaſt Particle of the Oil; yet if there be ſom Alkalious Salts boil'd with this Mixture of Oil and Water, the Globules of the Oil will be ſo broken, as to paſs readily with the Water thro the brown Paper, which before it would not in the leaſt. In like manner, the Globules of the Blood being broken by the means of Alkalious Medicins, together with too great a quantity of Alkalious Particles being before admitted into, or rather detained in it, are therby made capable of being received into the cutaneous Glands, which is the only occaſion of thoſe purple Spots on the ſurface of the Skin, not only in the Small-Pox, but other Fevers; which Spots ſeldom or never fail of being the certain tokens of future Death.

But this is not all, for by the ſaid breaking the Globules of the Blood by Alkalious Medicins, theſe ſmall broken Globules getting into the little Meanders of the Brain, hinder the Motion of the Animal Spirits thro the Nerves, and ſo cauſe Deliriums, and all thoſe fatal Diſorders of the Brain too frequently ſeen.

Likewiſe the Blood, which is not capable of being contained in its proper Channels, is the occaſion of violent Bleeding at the Noſe, bloody Urin, *&c.* which are none of the beſt Symtoms, but what too often happen by the ſaid means.

Beſides breaking the Globules of the Blood, and cauſing the foreſaid ill Symtoms, with many

many others I don't think fit to enumerat; by their Diaphoretic Quality there is so great a waste made of the Serum of the Blood, that there is not a sufficient quantity left to supply and bring to maturity those many Pustles (even more than Nature designed) that these Medicins alone had thrown out: So that about the ninth, eleventh, or thirteenth day, for want of a sufficient quantity of Serum to supply them, the Pustles fall, and the acrid corrosive Matter being absorbed into the Blood, causes secondary Fevers, which oftentimes prove very dangerous. I might expatiate much more, but I design brevity.

It may be said I have gon far enough in condemning the ordinary Practice as to the use of Alkalies and Diaphoretics, not having substituted a better and safer Method and Medicins in their room: but not too fast, that follows in its proper place.

The Small-Pox is a Distemper that requires the giving of as few Medicins as any Distemper whatever, unless in som extraordinary Cases; but yet I think it most unreasonable, that People (as is the common practice) should be left to the sole management of old Women and Nurses; which alone I verily believe has destroy'd more than the Sword it self. And tho but a few Medicins, as I said before, are generally necessary, yet the Ey of a careful, skilful Physician, and that from the beginning, is as convenient as in any Distemper what-

whatever, that seeing Nature's Operations, he may also observe the fit time to give the Medicins requisit. I confess I have heard som complain that such a Physician has had so many Fees, and never wrote one Bill for them. For such People, let me tell them, they complain without cause: for in many cases, especially in this, the Physician deserves his Fees better for not writing at all, than otherwise.

I own my self a profest Chymist, and in many things, tho not all, a Disciple of *Helmont*, and know nothing so delightful to me, as Chymical Operations: Yet in this case, nor indeed scarce in any acute Distemper, do I judg Chymical Medicins, at least the elaborate ones, to be absolutely necessary, tho many of them may do well, and are somtimes to be used: But I know no reason to fly to elaborat Preparations, when Nature has provided Medicins ready to our hands. Acids skilfully and timely given, I have seen, not only by my own, but by several Great Mens Practice, to be the only safe, effectual, and seldom or never erring Medicins in this Distemper; and why should we fly to Acids chymically prepared, when, as I said before, Nature has provided Oranges, Lemons, Citrons, Limes, and a great many more not necessary to mention, which for the most part answer our intentions, if skilfully given by an experienced hand? And as I hope I have shewn sufficient

ent Reasons to dissuade from the use of *Alkalies* and *Diaphoretics*, from the many direful effects that daily attend their use; so I hope to give as cogent ones to inforce the use of Acids, from the laudable, good effects I have seen from them: for in at least five hundred Patients that I have had of all Qualities to do with in this Distemper, in *Worcester* and *London*, to the Year 1695, when called in at the beginning of the Distemper, I know not that I have had one that has died, or bin disfigur'd; nay som that were brought into very ill circumstances by the use of Testaceous, Alkalious Pouders and Diaphoretics, I have retriev'd from the jaws of impending Death by fit and proper Acids.

[And in the Small-Pox that has raged during this present Year 98, I have not lost above three Patients, and the occasion of their Deaths, as I have all the reason in the World to believe, proceeded from Irregularities committed by their Friends before I was called in, *viz.* their giving them sweating Medicins upon their first being taken ill, which I earnestly caution all People against, as a thing that frequently proves fatal, as it also dos during the whole Course of the Distemper. But further, why should Diaphoretics be given at first to hasten the eruption of the Pustles, when it is evident to all cautious, observing Practitioners, that the only dangerous Small Pox is that where the Pustles appear within a day or two after

after the Patient is taken ill; wheras those that are four, five or six days before they appear, are generally free from all ill Symtoms? Therefore if we would imitate Nature in her regular operations, we should rather moderate, than rashly push forward the eruption of the Pustles.]

It may be wonder'd at that I make a difference between *Testaceous* Pouders and *Diaphoretics*, when the Testaceous, especially the compound ones, as *Gascoin's*, *Countess of Kent's*, *Lapis de Goa*, &c. are accounted Diaphoretics, and indeed are so: but my reason is, because for the most part, besides the said Alkalious Pouders, other more forcible Diaphoretics are also given.

Having in short given som hints concerning the cause of the Small-Pox, I need not again repeat them, but shall immediatly proceed to the method I take in the cure of it, which being according to Nature's dictates, is short and easy: For Nature in performing her Operations makes short and easy cuts; it being in the cure of Diseases, as in finding out and giving an account of the *Phenomena* of Nature by Philosophical Disquisitions, they that go upon the fewest Principles, generally discover most of her Secrets, and are capable of giving the best and most rational account of them; wheras they that are clog'd with multiplicity of Principles, and wander in tedious and uncouth Paths, thinking therby to get admission

into

into Nature's Cabinet, after they have spent much time, and taken a great deal of pains, at last sit down as wise as when they began, and not one jot wiser.

First, when I com to a Patient who has the Symtoms of the Small-Pox, which are so well known even to Nurses, that I need not spend any time about them: In the first place, if there be any manifest signs of the Stomach's being oppresst and clog'd with viscous Matter, as generally it is, I give a gentle, easy Vomit, sutable to the age and constitution of the Patient; and after that has don operating, som *Syrupus è Meconio*, or any other proper Opiat in due proportion. Afterwards, to allay the disorder in the Blood, occasioned by the intromission of Heterogeneous Particles, which Nature endeavors to throw out; and to confirm the Texture of the Blood, so as to inable it to rid it self of its Enemy, I give large quantities of any of the following Juleps.

℞ *Succi Aurantior. Unc. sex,*
Aq. Hordei lib. duas,
Sacchari Albi q. s. ad gratam saporem.
M. f. Julap. Vel

℞ *Succi Limon. Unc. quatuor,*
Aq. Hordei ℔ duas.
Cinnamomi Fortis Unc. semis,
Syr. E Rubo Idæo Unc. tres.
M. f. Julap. Vel

℞

℞ *Aq. font.* ℔ *unam ſemis,*
Vini Rub. ℔ *ſemis,*
Syr. E Rubo Ideo ℥ iii.
M. f. Julap. Vel

℞ *Aq. Cinnamomi Hord.* ℔ ii.
Succi Limon. Unc. quatuor,
Syrup. de Succo Lujulæ Unc. tres.
M. f. Julap.

Of any of theſe Juleps I let my Patients drink as oft and as freely as they will; drinking likewiſe ſmall Beer with Juice of Oranges in it, in as large quantities as they pleaſe: But during the whole courſe of the Diſtemper, all ſorts of Fleſh ought to be avoided.

To poor people, inſtead of the ſaid Juleps, and to ſave charges, I order large quantities of ſmall Beer, acidulated with Oil of Vitriol, or elſe Vinegar, or Verjuice Poſſet-drink, to be drank frequently, and in large quantities.

But if in the beginning, or afterwards, the Brain be much diſturbed, and the Patient delirious, for the moſt part I find it abſolutely neceſſary to let Blood, and that in a good quantity; and then to uſe more powerful Acids, giving the following Juleps in large quantities; which preſently calm the violent Motion and Agitation of the Blood and Spirits, and ſet all to rights in a ſmall time.

℞

℞ *Aq. Cinnamomi Hord.* ℔ *unam,*
Syrup. de Rubo Idæo Unc. unam sem.
Sp. Vitrioli Volat. Drach. sem.
M. f. Julap. Vel

℞ *Aq. Cinnamomi Hord.* ℔ *unam,*
Syr. de Rubo Idæo Unc. unam. sem.
Gas Sulphuris q. s. ad acidum Saporem.
M. f. Julap. Vel

℞ *Aq. Hordei* ℔ *duas,*
Epidem. Unc. duas,
Syr. Lujulæ Unc. tres,
Sp. Nitri, vel Vitrioli Dul. scrupulos duos.
M. f. Julap. Vel

℞ *Flor. Rosarum Rub. Drac. sex,*
Aq. Fontan. Bullientis ℔ *duas,*
stent in infusione in Vase vitreo clauso per quadrantem horæ, postea affunde Ol. Vitrioli vel Sulphuris per Campan. Scrupulos duos: macerantur per alterum quadrantem horæ, & coletur, colaturæ claræ adde Sacchari albissimi q. s. ad gratum saporem.

In all the Liquor they drink, I order a few drops of *Spiritus Nitri*, or *Oleum Vitrioli dul.*

If I find my Patient's Spirits languid and low, I give 3 or 4 spoonfuls of the following Cordial at due intervals, especially towards the

the end of the Distemper, when Cordials are most wanted.

℞ *Aq. Mirabilis,*
Epidem. ana Unc. tres.
Spirit. Citri Unc. sem.
Aq. Melissæ Unc. octo.
Syr. Garrioph. Unc. unam sem.
M. f. Julap. Cardiacum.

[Where there are any Symtoms of what is commonly called *Malignity*, I give either of the following Medicins during the whole course of the Distemper.

℞ *Rad. Angelicæ Hispan.* ℥ i.
Fol. Rutæ,
Scordii ana M. ß.
Vini albi,
Aceti Acerrimi, ana Unc. sex.
Infunde clausè & calidè in Vase vitreo vel tereo per horas tres, & coletur, colaturæ cap. Cochlearia sex quartâ vel sextâ quâq; horâ. Vel

℞ *Aq. Theriacalis Unc. quatuor vel sex,*
Aq. Rutæ Unc. sex,
Syr. Lujulæ Unc. unam.
M. f. mixtura in quatuor partes æquales distrib. quarum cap. unam quartâ vel sextâ quaq; horâ.

They may also take 10 or 15 drops of my Elixir of *Vitriol* three or four times a day in any convenient Vehicle.

If they are subject to be loose, I give the quantity of a Nutmeg of Conserve of *Sloes*, a little aromatized with Oil of Cinnamon, once in two or three hours, ordering them to drink afterwards a Draught of Tincture of Roses.

By this Method I have brought my Patients thro the Distemper, without scarce so much as any uneasiness, or being confin'd to their Beds, or the least fear of a secondary Fever, which frequently proves most fatal.

After the Pustles are quite gon, I take care to purge 'em well five or six times with gentle and easy Purges, after each Purge giving a *Hypnottic*. After I have don Purging, for som time I give corroborating, strengthning Medicins, to confirm the Texture of the Blood and Juices, and bring them to their natural State, wherby I prevent ill accidents, that somtimes succeed the Small-Pox.

I have not given a full History of this Distemper, that being contrary to my design, but endeavored to deter People from the use of such Methods and Medicins as have prov'd fatal to many, and to advance a better and safer Method in their room; yet I would not have people wholly rely on the Method here set down, but always have a Physician by to obviate any unusual Symtoms that may appear contrary to what generally dos; and where Life lies at stake, people can't be too cautious: But if the good old Women and Nurses, in spite of all

that

that can be said, will be still tampering, I must needs say, if my Method be exactly follow'd, I verily believe there would not one in ten die that have formerly by the use of *Alkalies* and *Diaphoretics*.

As I have before exploded the use of Alkalies, and given my Reasons for it; so I shall now give som Reasons for the Method I take with the great use of Acids in this case.

I judg the cause of the Small-Pox, as I before observ'd, to be from an intromission of Heterogeneous, or Particles of a different Nature and Texture from the Blood, into it; wherby it is put into a great hurry and disorder, in order to throw off its enemy; and that the place, by which Nature designs the discharge of these Particles, is the cutaneous Glands. Now the Inconveniences I observed to attend the use of Alkalies, were the throwing out of more Pustles than Nature intended, the destroying of the Globules of the Blood, and a waste of too great a quantity of Serum. I before forgot to mention one dismal effect of Alkalies and Diaphoretics, *viz.* that by destroying or breaking the Globules of the Blood, instead of regular Pustles being thrown out to the Surface of the Skin, the divided broken Globules are together with the morbific matter thrown out, as in the —— and so causes an *Erisipelas* or St. *Anthony*'s Fire, which seldom or never fails of proving fatal.

Now I defy any one to say he ever observed such Symtoms as these, when Acids were us'd from the beginning, which are of that nature as to confirm the Texture of the Blood, which is that red substance wherin is contain'd the *Byolycnium* * or Lamp of Life; and by so doing Nature is capable of throwing out the extraneous Particles in a sutable way, without the inconveniences that attend the other Method: For the Texture of the Blood being confirm'd, and moving regularly and naturally in its proper Channels, the morbific Particles are only thrown out, and such a quantity of Serum left as is sufficient to supply the Pustles, and bring them to maturity without any fear of their flatning, or the acrid Matter being again absorb'd into the Blood, and causing secondary Fevers. Besides, the Globules of the Blood being kept together unbroken, there is no danger of their being extravasated, and causing the fatal *Purple Spots*; nor of being thrown out together with the morbific Matter, and so causing an *Erisipelas* or St. *Anthony*'s Fire; neither are *Hemorrhagies*, at the Nose, bloody Water, *&c.* in the least to be feared; nor, by being admitted into the small Meanders of the Brain, to cause Deliriums, and those other Symtoms that attend it.

* *Nov. Lum. Chir.*

I might expatiate on continued Fevers, and other acute Distempers; but that would be to be guilty of Tautology: For I assign but one general

general Cause of 'em, tho I own the extraneous Particles causing 'em may be somwhat various; and according to the different size of the extraneous Particles, the parts affected may be different; as in the Small-Pox, the size of the Particles are such as to fit them to be thrown out by the cutaneous Glands to the surface of the Skin; in other Fevers they are thrown out, somtimes one way, somtimes another, according to their size. For instance, somtimes they are thrown out by critical Sweating, somtimes by Urin, somtimes by the Glands of the Mouth in spitting, and so on, according to the different disposition of the Particles causing the Distemper, which are fitted to be discharg'd thro the Pores of different Parts; and whatever way we find Nature inclin'd to act, we must assist her in it, but not spur her on, unless she be too sluggish, nor on any account whatever hinder or thwart her in her Operations.

In most continued Fevers we have found Alkalies as pernicious as in the Small-Pox, and Acids as advantageous; of which I shall give an instance or two.

After I came from *Flanders* in 1694, having discours'd with a certain Physician about a Fever that raged that Summer in *London*, and of which many died; he told me, when he found his Patients under such and such Circumstances, he as much gave them up for dead, as if a Dagger were run thro their Hearts. I

ask'd him what those Symtoms were, that render'd his Patients circumstances to be so dangerous? He replied, When he found them delirious, and had Spasms and Convulsions of the Nerves. I inquir'd of him, what Medicins he gave? He told me, a Composition of *Gascoin*'s Pouder, *Virginian Snake-Root*, &c. which he solely relied on, and is the same, or of the like nature with what is generally given. I ask'd him, whether he had never found his Medicin serviceable to him? He ingenuously confest, when his Patients were under those Circumstances, it never did him any service. I again ask'd him, why he did not vary his Method? His Reply was, his Medicin was a most noble *Alkaly* and *Alexipharmic*, and what was generally us'd, and therfore he did not think fit to vary from an establish'd Method.

A few days after I was called in to a Gentlewoman exactly under the same Circumstances before related; she was delirious to the highest degree, had violent Spasms and Convulsions of the Nerves, and all other Symtoms of a Malignant Fever. I despair'd not of her Life; and by the plentiful use of proper Acids, all Symtoms soon vanish'd, and in a week she was fit to go abroad.

Besides, I could instance in a hundred Cases of the same nature, but that I design brevity.

I must own other Distempers may be complicated with the Small-Pox, and other continued Fevers and acute Distempers; or from a different Constitution of the Air, *&c.* unusual Symtoms may appear; in which cases a general Method must not be relied on, but recourse must be had to proper Specifics.

I have so little reason to recant what I have said concerning the Cure of the Small-Pox and Fevers by Acids, that every day's experience confirms me in the truth of it: and were it not that I design a particular Tract of Fevers, I could expatiate here largely concerning the reasonableness of my Proceedings.

CHAP. II.

Of the Scurvy.

I Now com to treat of the disuse of *Alkalies* in the *Scurvy*, that reigning Distemper, from which few are altogether free; and is by most accounted incurable, or at least for the most part proves so.

But here I expect the cry of all Mankind against me; What! say there is no Acidity in the Blood in the Scurvy? What but an Acidity in the Blood causes the breaking out of Scabs, Pimples, Blotches. *&c.* on the Skin? What but a Sharpness in the Blood occasions those

dring Pains, and a thousand other Symtoms of which people laboring under this Distemper complain?

My Friends, have patience, and I will presently make it appear, that those Symtoms are not occasion'd by *Acids*, but by *Acrid*, *Lixivious*, *Alkalious* Particles; which I doubt not to evince by plain matter of fact.

First of all, by a Chymical *Analysis* it appears that the Blood of *Scorbutic* Persons has a far greater quantity of Volatile Alkalious Particles, than that of sound Persons; together with som quantity more or less of a Lixivious, fixt Alkaly, of which, for as much as ever I could find, the Blood of sound Persons is altogether destitute.

And by the way let me add this: If Physicians would chymically analyze the Blood of Persons in all Distempers, and make nice Observations of the different substances obtained from it, the cause of Distempers would be clearly known, and by consequence the cure of them much more certain than now it is. But that I may return to my business.

Another considerable Argument, besides that beforementioned, to prove the Scurvy has its rise from Alkalious Substances in the Blood, and not from Acids, is this which follows.

I have bin frequently told by som Seamen and Surgeons, that have had long Voyages at Sea, especially towards *China* and the *Indies*,

* that

that of a hundred Men in a Ship, not two of them but have bin almoſt eaten up with the Scurvy, their Skin ſqualid and full of Blotches, their Gums eaten away, and their Teeth ready to drop out, Pains and Aches all over their Bodies, *&c.* and yet on their landing at *Cadiz*, or therabouts, where is plenty of Oranges and Lemons, and eating large quantities of them, in one fortnight's time at fartheſt ſcarce one has fail'd of being perfectly cur'd. This is not a Relation of one or two Perſons only, but what is generally agreed upon, and allowed by all to be Truth.

Tho theſe moderat Acids plentifully uſed may have ſuch effects in that hot Country, yet I have not obſerv'd that in our cold Climat they have always, always I ſay, the ſame effect: becauſe in ſlight caſes they generally do well; yet in more ſtubborn ones we are forc'd to have recourſe to more powerful penetrating ones.

As for Alkalies, I don't believe ever any one was cur'd by 'em of this Diſtemper; tho I have known ſom that have taken a vaſt *Farrago* of Teſtaceous Pouders, *&c.* without any good effect, which afterwards has bin don in a little time with a ſmall quantity of proper Acids.

Before I conclude, I ſhall inſert a Preparation of *Antimony*, which I have found of extraordinary uſe in the moſt inveterat Scurvies.

Tinctura

Tinctura Antimonii.

℞ *Flor. Albor. Antimonii unc. octo, Spiritus Tartari volatilis ℔ duas, ponantur in Phiolâ vitreâ forti cum Collo oblongo; simul misceantur, & optimè agitantur; postea digerantur leni Calore Balnei per dies quatuordecem, tunc decanta Spiritum rubro colore tinctum a Floribus. Spiritus verò tinctus, e Cucurbitâ vitreâ per Alembicum abstrahendus a Tincturâ, usq; ad medietatem cum igne leniſſimo; Tinctura remanens, reservetur in Phiolâ cum obturatorio vitreo optimè clausâ. Spiritus, distillatione abstractus, potest iterum usurpari in eodem negotio.*

Spiritus Tartari volatilis Præparatio.

℞ *Tartari Rhenani puriſſimi ℔ viginti, colloca in Cucurbitâ ferreâ, cui adaptatur Alembicum aut ferreum aut cupreum; collo Alembici potest applicari Serpens stanneus aut cupreus, collocatus in Dolio aquâ frigidâ repleto: Junctura ubivis locorum ritè rectéq; sint munitæ cum optimo Luto; quando Lutum optimè siccatur, tunc distilla, primò igne lento, postea fortiſſimo, & continuatur donec nihil ampliùs elici potest. Spiritus prædictus, ab oleo fætido liberatus, potest miſceri*

cum

cum libris tribus Capitis Mortui ad albedinem calcinati, & ad medietatem usque, in Balneo Mariæ abstrahere è Cucurbitâ vitreâ per alembicum, quorum junctura sint ritè munitæ, & suum retinebit calcinatus Tartarus Fetorem una cum Phlegmate, stillante Spiritus parte solummodo puriore & subtiliore; qui denique cum ℔ duabus Capitis Mortui calcinati miscendus, & per Alembicum recentem rectificandus. Atque hic est Spiritus ille Tartari, cum quo prædicta extrahitur Tinctura, & quidem non solum hæc, sed etiam cunctorum Metallorum aliorum, id quod nullus præstare potest alius.

Of the aforesaid Tincture I use to give about four, six, eight or ten Drops, according to the age and strength of my Patients, Morning and Evening, in about half a pint of strong Infusion or Decoction of *Juniper* Berries, without any precedent Purgation; this Medicin performing that Office where there is occasion: it answers every thing generally said of a true *Panacea*, sometimes working by Vomit, sometimes by Stool, and sometimes by Urin, but mostly by a gentle *Diaphoresis* or Sweating. I once knew it to cause a Salivation, without any of the ill Symtoms that usually attend it, when rais'd by Mercurial Medicins. Whoever has a mind to see more of this Tincture, may read *Glauber Op. Mineral. Par. Prim.* from whom

whom I had it, tho I vary somthing from him. I have found it of great use, not only in the Scurvy, but many other Chronical Distempers, as Rheumatisms, Sciaticas, Dropsies, *&c.* and by som few Observations I have made, I believe it may do great things even in the Gout it self.

That I may excite People to the use of this noble Medicin, I shall presume to transcribe what *Glauber* declares of it, who I believe has said no more than it deserves.

'This noble Tincture of *Antimony* (says 'he) above all other Medicins, dos wonder-'fully evacuate all vitious Humors, and insen-'sibly purify the impure Blood; it opens 'all Obstructions of the Liver, Spleen, Kid-'neys, and all the other *Viscera* of a human 'Body, drawing from them all Malignity, 'leaving no Impurities there. And because it 'purifies the Blood, it cures the Leprosy, 'the French Pox, the Scurvy, and all other 'Diseases proceeding from the Impurity of the 'Blood. By its penetrative and attenuating 'Virtue it resolves all Tartarous Humors, and 'evacuates those that generat the Gout, and 'the Stone in the Kidneys and Bladder. 'But it dissolves not *Tartar* perfectly coagulat-'ed, but only mitigates the pain proceeding 'from it, and hinders its increase; to wit, at-'tracting and evacuating from all the *Viscera* 'both radically and fundamentally that which 'is not perfectly indurated and coagulated. It

'takes

'takes away all Fevers, and other Distempers 'proceeding from a superfluity of Humors. 'It sweetly evacuates Water contain'd between 'the Skin both by Urin and Stool. In short, 'it strengthens and purges the principal Parts, 'and preserves them from all preternatutal Ac- 'cidents. It is the best Preservative in time 'of the Plague, and all other contagious Di- 'stempers; and to those that are taken with 'any of them, a most excellent curative Re- 'medy, driving out and evacuating the Ma- 'lignity. In a few words, it is a universal, 'and even the best of all Medicins, being most 'profitable both for Young and Old, as it is al- 'so the most safe; but yet with caution to be 'administer'd, by reason of the most potent 'Qualities with which it is endow'd, it being 'as it were a greater Fire extinguishing or 'swallowing up a lesser. A better Medicin 'than this certainly cannot be desir'd, which 'is got out of a mean Subject in a short time, 'and with very little charge. I ingenuously 'confess I never saw the like, and I doubt not 'but it is one of the best of Medicins. Thus far *Glauber* himself, with a great deal more worth any Man's reading: *Vid. Op. Mineral. part.* 1. p. 35, 36, *&c.*

[I confess since I have left off the preparing my own Medicins, I could never get this Tincture so made as in any measure to answer my intentions: nay since I have by large experience found the extraordinary use of *Cremor Tartar*,

tar, and highly acidulated *Tartarum Vitriolatum*, in these cases I have not bin over anxious about it, it being a Medicin of difficult preparation, and the others easily to be procured at all times, and in all places.]

In *Scorbutes* attended with Pains, I have frequently known the following Tincture of admirable use, as I have also don in som sort of Gouts, in my Tract of which Distemper I have made mention of it.

℞ *Gum. Guaiaci pul. unc. duas,*
Succi Liquiritiæ Hispan. in ten. taleolas incis. unc. quatuor.
Sp. Vini rect. ℔ *unam.*
Infunde clausè & calidè per duos dies, postea decantetur Tinct. clara.

The Dose of this Tincture is a Spoonful Morning and Evening, either in a Glass of warm Ale, or the following Infusion.

℞ *Rad. Eringii unc. unam*
Lig. Sassafras Dracm. sex
Vini Rhenani ℔ *unam*
Aq. Font. ℔ *unam sem.*
Infunde clausè & calidè per horas quatuor, & coletur, colatura reservetur ad usum.

In Scorbutical Cases I have also found *Cremor Tartar* and *Tartarum Vitriolatum*, taken for a considerable time, to be of extraordinary

ry uſe. And I verily believe if *Cremor Tartar* alone was given in large quantities to our Seamen who go long Voyages, it would in a great meaſure, if not altogether, prevent the many Inconveniences that attend them by their Scorbutic Habits, which frequently ſo afflict them, that they are made altogether uncapable of doing their Buſineſs. Nay, I believe it would alſo prevent *Calentures*, and other fatal Diſtempers that deſtroy ſo many of our Men, either in long *Eaſt* or *Weſt-India* Voyages; and by its cheapneſs it ſeems rather adapted for the Neceſſities of the Poor, than of the Rich. But tho it be cheap, yet if we conſider but the Nobleneſs of its Extract, that alone is ſufficient to ſet a Value upon it: For what is it but the eſſential Salt of the moſt noble of all vegetable Productions, *viz.* the Juice of the Grape, that which rejoices the Heart of Man, and makes the Peaſant equal with his Lord, and the afflicted Man forget his Miſery? As for my ſelf I had rather be without a great part of the *Materia Medica*, than *Cremor Tartar*; for conſidering it as a ſimple Remedy, it is of the moſt univerſal extent of any thing I know. Without doubt it is the fineſt Purge in Nature given in a due quantity, it performing that Office without any griping or uneaſineſs; and in a leſs quantity is a moſt noble Alterative, it ſtrengthning the Stomach, and helping Digeſtion. It allays all violent and unnatural Fermentations of the Blood; it is a fine Diuretic.

retic. To be short, I question whether there be any one natural Production now known or in use, that in all respects is so adapted to do Mankind service as this Medicin is.

I confess it has for many Ages bin in use; but how? it has only bin trifled with, being given by Grains and Scruples, wheras it ought to be by Drams, and even Ounces on occasion: and unless it were *Angelus Sala*, I remember none I ever met with that has prescrib'd it in large quantities besides my self; and I confess I was first excited to it by what *Angelus Sala* said concerning the cure of himself, when he labor'd under a most dreadful *Colic*, which had like to have cost him his Life, from which he was presently deliver'd by taking (as I remember) six Drams of *Cremor Tartar*. The like Effect I have frequently seen of it in the most violent Colics imaginable, either given in a large quantity at once, or else two drams at a time, repeated every two, three or four hours, according to the urgency of the Case.

Helmont somwhere says, that every Poison carries along with it its own Antidote; and tho Wine drank in moderat quantities be one of the most noble Cordials in Nature, yet the drinking of too large quantities causes as many Inconveniences as any one thing: nay I believe there are more Chronical Diseases occasion'd by drinking of Wine and Vinous Liquors to excess, than from any thing else.

Now

Now I believe there is no one thing so adapted to prevent the Inconveniences that attend hard Drinking, as *Cremor Tartar* is, which is nothing but the Product of Wine it self. Nay, it not only prevents the Inconveniences of hard Drinking, but for the most part carrys off the Diseases already form'd, that are caused by it.

[I have within this two or three years given som hundred Weights of *Cremor Tartar* both in Chronic and acute Cases, and don't remember that I ever observed any inconvenience by it. And for a Purge it is the most delightful in the World; none of the purging Salts, about which there is now so much Noise made, being in the least comparable to it. Nay, I am sure that after Ages will thank me for recommending so cheap and useful a Remedy to the World.]

It would take up too much to say all that might be of this noble Medicin, and I must beg the Reader's Pardon for this Digression in saying so much as I have.

Before I conclude, I shall mention one Objection more against my Opinion, made to me by several, *viz.* That a more than ordinary Saltness is to be perceiv'd in the Blood of Scorbutic Persons, and this Saltness they take to be an Acidity. But if they would enquire narrowly into the matter, instead of finding it to be an Acid Saltness, it will appear to be a Lixivious, Alkalious one.

CHAP. III.

Of the Gout.

I Shall here make only som few Observations concerning the Gout, it being Cousin German to that of the Scurvy: and by what I have seen, I am fully convinced, it is not from Acids, as is generally said, that this troublesom Distemper is occasioned.

I have observ'd considerable large *Nodes*, in which are somtimes contain'd a hard chalky Substance, and of which I have seen large quantities extracted, which by many Experiments I have found to be as much an Alkaly as either *Crabs Eyes*, *Coral*, *Pearls*, &c. which I suppose no man will deny.

Now it being granted, that the matter contained in the aforesaid Nodes is an Alkaly, how is it possible for this Distemper to proceed from Acids, when in those very parts where the Distemper most violently rages, there are produced such large quantities of an Alkalious Substance? For if the Distemper proceeds from Acids, as 'tis generally agreed, the Patient need not clog his Stomach with Alkalies, as is usually practis'd, there being a Remedy already placed in the part affected: And I verily believe, the only reason why this

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Distemper has bin accounted among the *Opprobria Medicorum*, is from their mistaken Notions concerning it.

But if Men will still persist to assert that this Distemper proceeds from Acids, and at the same time own the chalky Substance beforemention'd, which is only the Morbific Matter indurated, to be an Alkaly, they must tacitly believe the Doctrine of Transmutation, tho openly they are asham'd to own it, and will ridicule those that do.

But this is not all; for suppose the Acid Matter causing this Distemper to be transmuted into a chalky, alkalious Substance, the Distemper must never more pretend to com in or near the part where this Substance is lodg'd, it being placed as a Sentinel to guard it off: Nay, the Blood at times must all, or at least a great part of it, pass thro the Part or Parts where this chalky Substance is lodg'd, by which means one would think it should be sufficiently guarded from any more growing Acid; and so by consequence, when the chalky Nodes are once settled, people have no reason for the future to fear the return of their Distemper; the contrary to which many honest Gentlemen to their sorrows experience. So that a man would think these very Nodes alone were sufficient, were there no other reasons to be given, to satisfy one who is master of his Reason, that Acids are not, but Alkalies are the cause of this Distemper. And if the

Blood abounds with too many Alkalious Particles, the giving of Alkalies must be preposterous, it being to add Fuel to the Flame, which instead of quenching or extinguishing, makes it so much the greater.

It may not be amiss to take notice, that few are troubled with the Gout, but those who drink large quantities of Wine, or som other generous Liquors abounding with vinous Spirits; so that the Blood and other Juices being impregnated with the said vinous Spirits, these Spirits meet with the volatil, alkalious Salt, of which even the Blood of sound People is never destitute; wherby the vinous Spirit is coagulated, and turn'd into that substance (or somwhat like it) which *Helmont* calls his *Offa Alba*: which coagulated substance not being capable of moving with the Blood and Juices thro the small Vessels, causes Obstructions and violent Pains, and in time, by the addition of other gross, terrestrious Particles, the forementioned chalky Substance.

By the foresaid Coagulation of vinous Spirits with the volatil Alkaly of the Blood, may a very good reason be given for the Generation of the Stone in the Bladder and Kidneys: And Mr. *Boyl* tells us (being what *Helmont* had before don) that having obtain'd som Stones of a certain *Lythotomist*, he put 'em into a Retort, and expos'd 'em to a strong Fire, and found the better half consisted of volatil, alkalious Salt, like that obtainable from Human Blood, and

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a conſiderable quantity of heavy Oil; ſo that it is plain the Generation of the Stone is not from Acids, but Alkalies.

From which may be infer'd, that it is not from the Acidity of Rheniſh Wine that the drinking of it is pernicious to Gouty People, but from its abounding with ſpirituous Particles more than moſt other Wines.

I ſhall here preſume to ſupply a few Omiſſions in my Tract of the *Gout*, which I doubt not will gain more and more Reputation every day, the Method there laid down being what will generally anſwer expectation.

I have (*pag.*79.) given an account of a Balſam of admirable uſe in taking off the moſt violent and tormenting Pains; which after it has bin uſed ſom time, will cauſe little Pimples and Bliſters on the Part: Now as ſoon as the Bliſters are once roſe, the uſe of the Balſam muſt be left off, which I forgot to mention, and not be repeated again, till the Bliſters or Pimples diſappear.

The ſtrengthning of the Stomach, and helping Digeſtion, being what generally gos a great way in the Cure of Chronical Diſtempers; therfore to people who either labor under a Fit of the Gout, or are ſubject to it, I preſcribe the conſtant uſe of the following Digeſtive Pouder, both while they labor under a Fit, and when free from it.

℞ *Crem. Tartari Dracm. sex,*
Cardamomi, Cubebarum,
Galangæ, ana Dracm. duas,
Sacchari rosati Unc. unam sem.
M. f. Pul. cap. quantum Mucroni Cultri contineri potest sæpiùs in die.

Instead of the *Elixir Sulphuris*, mentioned pag. 90. I frequently give the following *Elixir Vitrioli*, tho the Intentions of both are the same.

℞ *Garriophillor. Piperis nigri,*
ana non contus. Unc. duas.
Spirit. Vini Rect. ℔ unam.
digerantur leni calore arenæ, in Vase vitreo optimè clauso per dies septem; tunc guttatim instilla Ol. Vitrioli optimè rectificati Uncias quatuor; digerantur iterum per dies septem in eâdem calore, postea decantetur Elixir clara. Dosis est a gut. 15. ad 20 vel 30.

This Elixir is a noble Stomachic, and of admirable use in other Distempers besides the Gout.

Tartarum vitriolatum and *Cremor Tartari* I much rely on in the Cure of this Distemper; but this ought to be observed, that during the Fit they must be given in such quantities as will procure the Patient three or four Stools in the 24 hours, and no more, at least after the

the

the ſecond or third day: But if for the firſt two or three days they occaſion more Stools, it will rather be an advantage than otherwiſe. Therfore that things may be exactly regulated, the Proportions I have preſcrib'd muſt be varied according to peoples Conſtitutions and Strength.

When the Pain is not very ſevere, the Proportion of *Ol. Vitrioli* in the Balſam may be leſs than I have ſet down, *viz.* two Drams of *Ol. Vitrioli* to two Ounces of *Ol. Olivarum:* Let them be well mixt together in a glaſs Veſſel, till they com to the conſiſtence of a Balſam. With this Balſam I have two or three times ſeen ſomthing extraordinary don in *ædematous* Tumors; as I have alſo in eaſing other Pains beſides that of the Gout.

[It being a year ſince the ſecond Edition of this Eſſay came abroad, I have now ſeveral Obſervations to add to my Tract of the *Gout*; but conſidering that is alſo reprinting, I ſhall add no more in this Place.]

CHAP. IV.

Of Rheumatisms.

THIS is another Distemper generally said to proceed from Acids in the Blood, but very falsly, as I hope fully to make appear, having had to do with multitudes under this Distemper, and thanks to God, with good success.

I shall not inquire into the original Causes of this Distemper, which are various, that being forein to my design; but immediatly proceed to the business I have undertaken.

First of all; having by the Fire analyz'd the Blood of Rheumatic Persons, I have found it to abound more with Alkalious Particles than that of sound Persons, but not the least grain of an Acid Substance in it: from which alone it may readily be infer'd, That it proceeds not from Acids, but from Alkalies.

But it may be objected, From whence proceeds that *Syziness* and *Viscosity* of the *Serum*, which is observ'd in the Blood of Rheumatic Persons, if not from Acids? For we know that Milk, which is a sort of Serum of the Blood, let it be never so fluid, by the addition of any Acid, tho very gentle, a great part of it will immediatly coagulat and turn into Curds.

To

To which I anſwer, That the foreſaid Objection is altogether invalid; the Viſcouſneſs obſerv'd in the Serum of the Blood, being quite different from that of the Curds in Milk: tho there are ſubſtances contain'd in Milk, fit to make both Blood and Serum; but Milk is a much more compound Liquor than the Serum of the Blood: ſo the compariſon being between Subjects vaſtly different, it is of no weight.

But ſuppoſe the compariſon good; what agreement is there between Curds, and a Subſtance like Gelly? None at all that I know.

But if inſtead of curdled Milk, they had made the compariſon between the inviſcated Serum and Hartshorn Gelly, they had bin in the right; for indeed I know not any two Subjects more fit to be compar'd together. But then this compariſon will not at all prove the Inviſcation of the Serum to proceed from Acid, but from Alkalious Particles; for all who know what Hartshorn is, know the reaſon of its making a Gelly, is from its abounding with volatil alkalious Salts: and for the ſame reaſon it is, that Calves Feet, Izing-glaſs, Ivory, *&c.* make Gellies.

By what I have ſaid, I hope I have freed Acids from cauſing the Viſcouſneſs of the Serum of the Blood in Rheumatiſms; which Viſcoſity, if once taken off, the Diſtemper immediatly vaniſhes: Yet this is not to be don by Alkalies, that ever I could ſee, tho I have given 'em in large quantities; but it is expeditiouſly

outly to be don by proper Acids, such as the forementionn'd Tincture of *Antimony*, *&c.* and *Chalybeats*.

But here People will think I am caught in a Trap, when I bring in *Chalybeats* among the number of Acids, when generally own'd by all to be Alkalies: to confirm the Truth of which, they tell you it is manifest, that Filings of Iron will make as great an Effervescency with all sorts of Acids, as any of the Alkalies I have mention'd; therfore I must be much in the wrong in reckoning *Chalybeats* among Acids.

From this difficulty I shall endeavor to extricat my self, and also to prove, That Iron or Steel, till converted into a *Vitriol*, which all will allow to be an Acid, cannot act upon the Blood or Serum to cause an alteration in it, nor so much as any way to enter into the Veins or Arteries.

It is the custom of skilful Practitioners, before they give Steel Medicins, to inquire whether their Patients are sensible of any Acidity in their Stomachs: in which part I allow Acids oftentimes to abound, and that exorbitantly. If they perceive any Acidity there, it is found necessary to give Iron or Steel, without any Preparation at all, because by means of the Acids in the Stomach it is turn'd into a *Vitriol*, and so made capable of being carried into the Blood; wheras in such cases, if it has bin before satiated by a precedent

Pre-

Preparation, it has little or no effect at all. On the other hand, if there be no sensible Acidity in the Stomach, Iron or Steel given unprepar'd, are carried off by Stool, without the least alteration, or any part of it admitted into the Blood.

[In Hypocondriacal and Histerical Persons, who mostly complain of an Acidity in their Stomachs, I have with wonderful success given four or five Iron Bullets filed from small Rods every day just after Dinner, and have ordered the continuance of them sometimes for three or four Months; and when all other Methods have failed, this has effectually taken place.]

All or most of the Preparations of Steel I know good for any thing, are perform'd by means of Acids, which tend to the dividing their parts, and turning them into a *Vitriol*. Now according to the difference of the Acids us'd, the result is a different sort of *Vitriol*, which has different operations: But on the contrary, Alkalies do so lock up the Body of Iron, as to make it unfit to be taken as Medicin, because of its extraordinary hardness and firmness of Texture.

The Preparations of Steel I generally use is that which gos by the name of Dr. *Willis*, and is almost every where to be had; which tho grown common, is no despicable Medicin, and is that which follows.

Take

Take of filings of Steel, or rather Iron, very clean and free from dust, one Pound and half; Sal Armoniac *two pound: make the* Sal Armoniac *into very fine Pouder; then mix them well together in an iron or stone Mortar; then put the mixture into a moist Cellar, and let it stand a week: Then put it into a very large Crucible, which cover with a piece of Tile; afterwards put the Crucible into a Charcoal Fire, which increase by degrees, till the Crucible be almost red hot: after it has continued in this state about an hour, take away the Fire, and let your calcined matter cool by degrees; when cold, take it out of the Crucible, and make it into fine Pouder in a glass or stone Mortar; then put it into a Bottle with a wide mouth, which stop with a glass Stopple, and keep in a warm place.*

[The Method I use in making that Preparation of Steel, known by the name of Dr. *Willis*, is as follows.

Take clean filings of Steel one Pound, Cremor Tartar *three Pound; mix them well together in an Iron Mortar; then put them into an Iron or Earthen Pot; pour upon them a Gallon of Spring Water, and over a very gentle Fire evaporate to the consistence of Hony, stirring all the time with an Iron* Spatula: *afterwards add another Gallon of Water, evaporate as before;*

fore; then take it out, and put it upon an Iron or Tin Plate: let it ſtand in a warm place till it is perfectly dry; then make it into fine Pouder, and keep for uſe.]

Theſe two Preparations properly given, and with convenient Vehicles, I have known of great uſe in ſom Rheumatiſms: and the firſt, when all other Medicins have prov'd ineffectual, ſcarce ever fail'd me in the moſt inveterat Obſtructions of the *Menſes* in Women.

Beſides the foremention'd Preparations of Steel, I have frequently found *Cinnaber* of *Antimony*, or even common Cinnaber mixt with a due proportion of *Gum Guaiaci*, and given in large quantities, to be of great uſe, not only in ſom confirm'd Rheumatiſms, but even in *Sciaticas* of long ſtanding, by which alone I have known many cured.

I formerly believ'd Cinnaber of Antimony, and common Cinnaber to be Alkalies; but ſince I have more nicely inquir'd, I find by a peculiar management, a large quantity of an acid, ſulphureous Spirit may be obtain'd from them: [And unleſs the *Mercury*, which is a main ingredient in the Compoſition, be accounted an Alkaly, there is no ſuch thing to be found in it. But for my part, what to make of that fugitive Servant of poor Chymiſts, I cannot tell; and muſt ingenuouſly own, after much Mony and Time ſpent in inquiring into the nature of it, I know no more than what I

do

do by its effects, which are somtimes extraordinary, if manag'd with discretion.]

Before I conclude this Head, it will not be amiss to observe one thing about the Preparation of Steel beforemention'd, *viz.* that while it is kept dry, and in a Pouder, it is one of the greatest *Deoppilatives*, or openers of Obstructions imaginable: But let it be put in a Cellar, and run *per deliquium*, which it will in a few days, 50 or 60 Drops of the said Oil *per deliquium*, given twice a day in a strong Decoction of *Oak Bark*, I have of late found rarely to fail in stopping a seminal Flux, which all will allow has hitherto bin found as difficult as any thing whatever. Som having told me, they suppos'd the Stipticity to proceed from the Decoction of Oak Bark only, I purposely tried it alone: and tho I own Oak Bark to be a noble Stiptic, and to do Wonders, the Decoction being taken at the Mouth, and by way of Clyster, in common simple *Diarrheas*, and even somtimes in bloody Fluxes; yet in the forementioned case it would do nothing at all: but adding som drops of the Oil of *Mars* to the Decoction, it soon had the desir'd effect.

Of late I have bin induc'd to use the following Method in the Cure of Rheumatisms, and in a great number of Cases it has rarely failed me; and where it has failed, I have not had the least Temtation to blame the Method or Medicins.

Be

℞ *Tart. Vitriolati Dracm. unam*
Cremor. Tartari Dracm. ſex
Ol. Garrioph. gut. ſex
Sacchari roſati Dracm. tres
M. f. Pul. in ſex Chartulas diſtribuend. ex quibus cap. unam quater in die in Cochlear. Syr. e Rubo Idæo, ſuperbibendo hauſt. Julap. ſequentis.

℞ *Rad. Eringii Unc. duas*
Aq. Font. ℔ duas
Infunde clausè & calidè per horas duas vel tres, & coletur; colaturæ adde Vini Rubri Gal. unc. octo
Syr. de Rubo Idæo unc. tres
Elix. Vitrioli gut. 40. M.

℞ *Elix. Vitrioli Dracm. duas*
cap. gut. duodecem in hauſt. Vini Rub. & Aq. Font. ana p. e. horâ dimidiâ ante prandium.

℞ *Spt. Vini non Rect. unc. ſex, vel octo, vel decem.*
Ol. Vitrioli Dul. unc. unam.
M. f. Mixt. cum quâ embrocentur Partes affectæ manè & ſerò, ſuperponendo Pannum laneum.

℞ *Cremor Tart. Dracm. ſex*
Cardamomi, Cubebarum,
Galangæ, ana Drac. duas
Sacchari Roſati unc. unam ſemis.
M. f. Pul. cap. quantum Mucroni Cultri continerî poteſt ſæpiùs in die.

After

After the Pains are quite gon, I prescribe a Steel Course for 3 Weeks or a Month, and during that time a continuance of the *Elixir* of *Vitriol* before dinner, and of the *Digestive Pouder*.

But in this case, as well as in the Gout, the quantity of *Cremor Tartar* and *Tartar Vitriolatum* ought to be such, as to occasion 3 or 4 Stools in 24 hours, and no more, at least after the first day or two; and therfore as peoples Strength and Constitutions vary, the quantities ought to be lessen'd or increas'd, as occasion is.

The *Oleum Vitrioli Dul.* for the *Embrocation* is as follows; that commonly sold in the Shops, which is made by Distillation, being good for little or nothing.

℞ *Ol. Vitrioli opt. rect.*
Sp. Vini Rect. ana p. e.
Cum cautelâ misceantur, & postea digerantur leni Calore arenæ, in Vase vitreo optimè clauso per dies decem, & reservetur ad usum.

[To conclude, and as an addition to this Edition of my Essay, I shall make the following remarks, being the effects of farther observation.

Rheumatisms, properly so called, may be distinguish'd into *Acute* and *Chronic* ones. An Acute Rheumatism is as much an inflammatory Distem-

Distemper as a *Pleurisy* or a *Peripneumony*; but by reason the offending Matter is not lodged on any of the noble parts, the consequence is not so fatal. Now people being ill treated in Acute Rheumatisms, their Distemper becoms a Chronic habitual one, which perhaps hangs upon 'em for many years, with many instances of which I have of late met. Now in Acute Rheumatisms, I always or mostly use the last Method, only omit the Digestive Pouder; and somtimes instead of the Embrocation, I bathe the Parts with good *Elder* Vinegar, or Vinegar impregnated with other Aromatics; and let them drink plentifully of *Lemonade*, or other acidulated Liquors. After the Distemper is over, to confirm the Tone of the Parts, which can't fail of being debilitated by the great pains, I put them into a Steel Course for three Weeks or a Month. In Chronic ones, where the Blood is sizy, I use the same Method with the digestive Pouder; and in neither of them scarce ever fail of Success. But in Chronic Rheumatisms, where the Blood is not sizy, I give the foremention'd Medicins, with *Gum Guaiaci*, &c. where they want Evacuations; which, as is elswhere observed, being given in due quantities, never fails to prove a noble Purge. But where they do not want evacuations, I altogether rely on proper *Chalybeats*, suted to the Constitution. This Subject alone deserves a particular Treatise; but I have already promised so much, that I can't

think of any such thing, till what I am about is finished, which will not be in a short time.]

CHAP. V.

Of Consumtions.

I Have little to say at present on this Subject, but that I have seen great numbers of People under this circumstance, to whom large quantities of Alkalies, all sorts of *Balsamics*, and those things called *Pectorals*, have bin given without the least advantage; tho I have seen others that have had the manifest signs of a confirm'd *Phtisis* or Consumtion, who by the plentiful use of proper Acids have bin reduc'd from a state of dying to perfect Health.

My Reasons in short, according to the best Observations, for the use of Acids, and the disuse of Alkalies, are as follow.

The Globules of the Blood, by reason of too great a quantity of Acrid, Alkalious, Lixivious Particles mix'd with it, being broken, and confusedly mix'd with the Serum, are together with the Serum admitted into the small Glandules of the Lungs; and not being capable to be discharg'd, cause Inflammations there, and by consequence Hectic Fevers, which always precede and accompany a *Phtisis* or Consumtion. Now by the use of Alkalies and

and Balſamics, theſe extravaſated, broken Globules are ſo far from being thrown out, and the deprav'd ſtate of the Blood from being alter'd, that it is made much worſe; and by Balſamics the Puſtles, occaſion'd from the extravaſated Globules being admitted into the ſmall Glandules, are brought to Suppuration, the neceſſary conſequence of which is an Ulceration; and when ſo tender a part as the Lungs is once ulcerated, he muſt ſhew himſelf an Artiſt indeed that can heal it.

Now proper Acids given in due time, confirm the Texture of the Blood, and reduce the Serum to a ſtate of fluidity, wherby the Fever and Inflammation of the Lungs are taken off: and the extravaſated Globules of Blood, by means of a thin Serum, aſſiſted by its quick motion in that part when in a fluid ſtate, are by degrees carried off, and ſo the Puſtles diſappear.

But it may be objected, How com the broken Globules of the Blood you ſo often mention, to be admitted with the Serum into the Glands of ſeveral parts, and yet cannot by the ſame reaſon be carried to the parts deſign'd with the Serum or *Lympha*, as it is ſtil'd, when it once coms into the Lymphatic Veſſels?

To which I anſwer, That when they are firſt admitted into the Glands, I mean the broken Globules, coming juſt out of the extremities of the Arteries, and being then very hot, the ſides of them are lax, and in ſom mea-

sure capable of being compreſt or ſqueez'd together; but when once admitted into the Glands, the motion of the Serum from them, thro the Lymphatic Veſſels, being very ſlow, they ſoon grow cool, and ſo more firm; and by reaſon of the different figure of theſe broken Globules from the Pores, by which the Serum is to paſs from the Glands to the Lymphatic Veſſels, they are not ſuffer'd to go thro with the Serum, as in the foremention'd inſtance of Oil and Water: ſo that the Globules being extravaſated and without motion, corrupt, from which Corruption proceed all the ill Symtoms that accrue from the broken Globules of the Blood being admitted into the Glands.

I am furniſhing my ſelf with Materials, in order to write a particular Tract concerning Conſumtions; in the Cure of which Diſtemper I hope to make more conſiderable Advances than have bin yet made, and therfore ſhall ſay no more concerning it in this place.

But to return to Acids. To confirm the truth of what I have ſaid, beſides my own Obſervations, I remember *Riverius*, that famous Practitioner, ſomwhere ſays, That he ſeveral times cur'd a confirm'd *Phtiſis* or Conſumtion, by giving only large quantities of Conſerve of red Roſes, well acidulated with Oil of *Sulphur per Campanam*.

And now I am ſpeaking of that Oil, let me add the account *Helmont* gives of it in his *Arbor Vitæ*; which tho it has no immediat relation

tion to the Point in hand, yet may be pertinent enough, to shew the good effects of Acids in keeping the Blood in a good Texture, and by that means prolonging Life, and preserving us from Diseases. *Moses*, who perhaps understood the Mysteries of Nature as well as any Man, and was guided by an infallible Spirit, says, that in the Blood is contain'd the Life. Now the Texture of the Blood being confirm'd, and its Globules whole, must go a great way towards prolongation of Life: But on the contrary, the Texture of the Blood being spoil'd, and its Globules broken (which they are by Alkalies) must in great measure shorten Life, and occasion Diseases.

In the Year 1600, says *Helmont*, a certain Poor Man, being burden'd with many small Children, complain'd to me that he was 58 years of age, and if he should chance to die, his Children must go a begging. He ask'd of me somthing, wherby his Life might be preserv'd. I being a Young Man, and commiserating his Condition, consider'd that a lighted Match of Brimstone would preserve Wine from Corruption; and therfore concluded, that the Acid Oil of Sulphur did necessarily so contain this Flame of Sulphur, and all the Smell of it, that it self was nothing else, meaning the Acid Spirit or Oil, but the Fume of Sulphur it self, imbib'd by its Mercurial Salt. Last of all, I was confirm'd that the Blood was the Wine of our Lives; and that being preserv'd,

if it occasion'd not long Life, would at least in som measure lengthen it, by our being guarded from Diseases, and free from Pains. Wherfore I gave him a Pot full of the distill'd Liquor, or Oil of Sulphur, and likewise taught him to distil the said Oil from kindled Brimstone. I furthermore bid him take every Meal in the first draught of Beer he drank, two drops of the said Liquor, and by no means exceed it; I being satisfied that two Drops did contain a large quantity of the Fume of Sulphur. The Man followed my Advice, and now walks about the Streets of *Bruxels*, being 1641. And, which is more than all, for the whole 40 years he never labor'd under any Distemper, tho once by a Fall on the Ice he broke his Leg near the Knee; yet all the time he was under Cure he was free from a Fever. He continued slender and lean, and tho in want of all necessities, liv'd to be thus old. The Name of this old Man is *John Mass*, who served in the Bed-Chamber of the Bishop of *Ypre* when Count *Egmont* and *Horn* were beheaded, and was then 25 years of age.

The Truth of this Relation need not in the least be doubted, the Man being alive and well when it was wrote. By which Instance it is plain, that Acids are not the Cause of Diseases, but Preservatives against them; and whatever is a Preservative from Distempers, by parity of reason must be of use to repel them.

A ſignal Inſtance of which I remember I have ſomwhere read, of a Perſon who ſuffered himſelf to be bit by a Viper, in order to try the good Effects of Monſieur *Charras*'s Volatil Alkalious Salt of the ſame Animal, in preventing and taking off the Symtoms that attend the Biting of the ſaid Creature. The Volatil Salt and other Antidotes were in large quantities given, but all in vain; for inſtead of allaying, the Symtoms ſo increaſed, that nothing leſs was to be fear'd than the loſs of the poor Man's Life. To the beſt of my remembrance, nay I think I may be poſitive, it was in the Wriſt where he was bitten; but for all the Volatil Salts and other Antidotes, in a little time his Arm was ſwel'd ſo big, and ſo high, that Amputation could do him no ſervice; nay, all the By-ſtanders, that were many, gave him up for dead. At laſt a certain Perſon advis'd giving large quantities of only ſo ſimple an Acid as Juice of *Citrons*; which immediatly abated the Symtoms, and retriev'd him from all manner of Danger. [See more of this matter in my Account of the Cure of the Perſon bit by a Viper.]

We live in an inquiſitive Age, wherin People have more ſenſe than to take things on truſt: The obtaining of the Blood both of healthy and diſtemper'd Perſons, is not difficult; and I deſire no greater juſtice, than that People would themſelves try the truth of what I have ſaid: and if after trial it be found that

the Blood of persons in any of the forementioned cases, has any Acid abounding in it, I will own my self in the wrong; but shall never take the least notice of such scurrilous Answers as I have bin used to, nothing of that nature being in the least valid with me that is not confirm'd by well-attested Experiments.

The Conclusion.

IT is, I suppose, allowed by all that *Sea-Salt* is an Acid, and for that reason only, we who eat so much Flesh are not able to live without it. For all sorts of Flesh abounding with large quantities of volatil Alkalious Salts, if these were not in som measure lock'd up and mortified by the means of Sea-Salt, or (which is all one) what is the product of our English Brine-pits, which have their saltness from the same origin, *viz.* Currents of Water passing thro great Rocks of Salt; which late Discoveries have made appear to be both in *England*, and many other parts of the World; as for instance, one in *Cheshire*, whose Vein is 20 Yards thick, and may be traced for many Miles together; which alone is sufficient to impregnat almost an Ocean of Waters: I say, were it not that the Volatil Alkaly contain'd in the Meat we eat was in som measure lockt up

or mortified by means of the foreſaid Salt, the eating of quantities of Meat would certainly deſtroy us. [The conſtant uſe of Bread alſo is of no ſmall advantage to us, it being a Subſtance greatly abounding with Acid Particles, as by the analizing of it will eaſily appear.]

There is reaſon to believe, That before the Flood People did not eat Fleſh, but liv'd altogether on Vegetables, as Fruits, Herbs and Roots; which I ſuppoſe was one great reaſon of their Longevity. And it may be obſerv'd, that in *Herefordſhire*, and other Countries abounding with Fruit, the People are longer liv'd than in thoſe Countries that want it. But had the *Antediluvians* eaten Fleſh, as we do now, I can't imagin what they would have don for Salt: for ſuppoſing Dr. *Burnet*'s Hypotheſis true (of which I think there is no reaſon to doubt, his Arguments being to me unanſwerable) I ſuppoſe their Rivers muſt have bin altogether void of Saltneſs; and how they could com at Salt any other way, conſidering the ſtate of their Earth, I can't imagin: And for them to have eaten Meat without Salt muſt neceſſarily have greatly prejudic'd their Healths, and ſhortned their Lives. For we have ſeen in the late *Iriſh* Wars great Deſtruction and Deſolation in our Army by eating Meat without Salt, of which at one time there was a ſcarcity; whole Regiments having bin ſwept away together with Fevers and Fluxes. But the *Antediluvians* living on Vegetables,

tables, had no need of Salt, there being a sufficient quantity of Acidity in them to confirm the Texture of their Blood, and preserve them from Diseases.

That the Food of the *Antediluvians*, was only Herbs, and the eating of Flesh was not allowed till the Waters of the Flood were abated, the following Texts evince. *Gen.* 1.29. After God had said to *Adam, Be fruitful, and multiply, and replenish the Earth*, and had given him Dominion over the Creatures, it coms in; *And God said, Behold, I have given you every Herb bearing Seed, which is upon the face of all the Earth, and every Tree in which is the Fruit of a Tree yeilding Seed; to you it shall be for Meat.* After the Waters of the Flood were gon, God blesses *Noah* and his Sons, as he had before don *Adam*, and said to them, *Be fruitful, and multiply, and replenish the Earth*; and then gives them Dominion over the Creatures: after which he says, *Ch.* 9. 3. *Every moving thing that lives shall be Meat for you; even as the green Herb have I given you all things.* Now after the use of Flesh was allow'd, we find no one person, *Noah* excepted, who arrived to the Age of any of the Antediluvian Fathers, the natural reason of which is very plain.

Since I have bin mentioning Sea-Salt, I shall make bold to relate a strange and accidental Cure wrought on a Person in a *Tympanitis*, given over as incurable by the most eminent

nent Phyſicians of *England*, by barely immerging her two or three times over Head in Sea-Water.

The Perſon was Daughter to an eminent Citizen of *Worceſter*; ſhe had labor'd under a *Tympanitis* three or four Years: her Father applied to moſt of the eminent Phyſicians for Advice, but all they could do ſignified nothing. He has ſeveral times told me, that his Cloak, tho he was a corpulent Man, would not lap round her, her *Abdomen* was ſwel'd ſo big, and ſhe then not above ten Years of Age. It happen'd one Morning that her Mother, two Brothers, her ſelf, and a Maid-ſervant, were bitten by a little Dog they had, that was grown mad. Advice was preſently given by Dr. *Johnſon*, an eminent Phyſician then in *Worceſter*, that they ſhould all go to the Salt-Waters to be dipt; (obſerve by the way the efficacy of theſe Waters in preventing the dreadful Symtoms that attend thoſe bitten by Mad-Dogs.) The Mother, with her two Sons and Maid-ſervant prepar'd to go; but ſhe did not deſign to take her Daughter with her, ſuppoſing her not capable of living till ſhe came to the Journey's end. The poor diſtreſt Child ſeeing 'em all going away without her, told her Father he took care of every body elſe, but valued not what became of her; on which he being moved with compaſſion, reſolv'd ſhe ſhould go, let the event be what it would. Accordingly ſhe was carried down, and when ſhe came to

be

be dipt, it was as much as two Men could do to immerge her over Head: After they were all dipt, they were carried to an adjacent House, and put to Bed, where she had not bin many Hours, but she call'd for a Pot, and piss'd several Quarts, even more at that one time, than she had don som Months before; and when they return'd to *Worcester*, which was within a few days, she run out of the Boat to her Father without any help, tho she had not bin able to stand of a year or two before. To be short, without any other help, she was perfectly cur'd of her *Tympanitis*, and is now a tall, slender, healthy Woman as any I know.

I have mention'd this thing, because I find it no where taken notice of, and it may be of service to others. Nay, I am told a certain obscure Person in *Herefordshire* has cur'd several by the same Method, to his great Advantage, who withal says, it never once failed him.

I beg the Lady's pardon for writing this Relation without her leave; but since I have no other end in it than to serve Mankind, I doubt not I shall be excused.

Helmont positively says, and I have found it true, That Spirit of Sea-Salt which is an exalted Acid, is a certain Remedy in the *Strangury*, a Distemper generally said to proceed from Acids; which if it dos, instead of being cur'd, must be highly exasperated by Spirit of Sea-Salt, the contrary of which I have frequently experienced. *Helmont* somwhere

else

else says of it, *Est namque Acidissimus, nec sibi par habet remedium extinguendis ardoribus Urinæ, etiam præsente in Vesica Calculo.*

I remember not long since an Eminent Physician told me, that bare Juice of *Lemons* would sooner take off the Heat of Urin in People that are, as we call it, clap'd, than *Emulsions*, or any thing commonly used: which since I have found true; and also that the Urin of such Persons abounds more with Volatil Alkalious Salt, than that of sound People: Upon which I have bin induc'd to try whether the Acid Spirit of *Guaiacum*, which that Wood affords in large quantities, would not be more prevalent in the Cure of confirmed Poxes, than the bare Infusion or Decoction of the said Wood; which in conjunction with *Cinnaber* of *Antimony* or common *Cinnaber*, and *Gum Guaiaci*, I have frequently given with good success in confirm'd Poxes; nay, som that have eluded the Force of a regular Salivation, I have cur'd by this Method.

I am apt to believe, if the rectified Acid Spirits obtainable from most, if not all Woods, were us'd, they would be found to be great *Specifics* in most Distempers, especially Chronical ones. And I have great reason to think that rectified Spirit of *Ash*, taken for a considerable time together morning and evening in a proper Vehicle, would prove a noble Medicin, in gradually wasting Stones already form'd either in the Kidnys or Bladder.

And

And since I have mention'd *Specifics*, I own it may be rationally objected, That my Doctrin of *Acids* dos mightily thwart that of *Specifics*, of which many, that are neither Alkalies nor Acids, seldom fail of curing Distempers, as likely to be supposed to proceed from Alkalious Particles abounding, as any whatever.

To which I answer, that I have only brought my Doctrin upon the Stage, as a general one, in opposition to that general and pernicious one of Alkalies. For should I deny the Doctrin of Specifics, I must deny matter of fact; which I shall never do till totally depriv'd of my Reason.

There is a little Herb called *Paronychia cum Foliis Rutaceis*, or *Whitlow Grass*, with Leaves like *Rue*; which the Honorable Mr. *Boyl* recommends as a Specific in the King's Evil: This Herb I have immerg'd both in moderatly Acid and Alkalious Liquors, and could perceive no *Luctus* or Effervescency; yet I have known it do wonders in the foremention'd Distemper, without having the least sensible Operation: I shall give one instance.

A poor Woman in *Worcester* having an only Child of about ten Years of Age, who by weaving Bone-lace maintained both her and it self, made a great complaint to me one day that she was undon. I asked her the cause; she told me, her Child who kept her in her old Age from Begging, had for two Years had Scrophulous

phulous Tumors in and near her Privities; and that about three Months before, one of the said Tumors began to ulcerat; and that now the Ulcers were got into her Body, which made her uncapable of Sitting. I went immediatly with the Woman to see her Daughter, and found what she said was true, the poor Girl being the most miserable Spectacle I ever saw. I remembring what Mr. *Boyl* had said concerning *Paronychia*, and being sufficiently satisfied there was no reason to doubt of any thing he had said, when related as matter of Fact on his own Knowledg, resolved to try it upon this Girl. I first purged her three or four times with *Calamelanos*, *Rezin* of *Jallap*, and *Cremor Tartar*; and afterwards gave her two large Handfuls of the said Herb dried, ordering her to put it into two Gallons of small Beer after it had don working, and to let it stand six days, and then drink it for her constant Drink: She continued to take it for about two Months, in which time, without applying any thing to the Ulcers save clean Clothes, both Ulcers and Tumors vanish'd; and she continued well till I left *Worcester*, which was two years after the Cure, and is so still for ought I can hear, having several times inquir'd after her.

[I have several times since made use of the said Herb with good success, tho I cannot say it will always succeed, there being som *Scrophulous* Cases, wherin nothing yet known will take

take the least place. I have seldom recommended Medicins without full trial, but at this time shall presume to propose the use of *Staveſacre*, applied by way of Pultice to inveterat scrophulous Tumors, at the same time using such evacuating Medicins as won't debilitate Nature. The reasons for my recommending it I think not fit to take notice of now; but if I find it answers expectation, I shall do it hereafter.]

Another Instance of the Operation of Specifics, without their being either Alkalies or Acids, is that frequently experimented Decoction of *Mercury*, after having bin boil'd a considerable time in Water, which has bin found not to lose the least Grain of its former Weight, or impart either Taste or Color to the Water; yet the Water in which the Mercury was decocted, has not fail'd of killing and bringing away Worms, when other celebrated Medicins have.

Likewise *Crocus Metallorum*, and other Preparations of *Antimony*, being barely infus'd in Wine, without losing the least Grain of their Weight, or imparting either Smell, Taste, or Color to the Wine in which they are infus'd, never fail of giving the Wine a violently *Emettic* Quality. I have at several times pour'd above 20 Quarts of *Canary* upon the same Ounce of *Crocus Metallorum* pouder'd, and found the last Quart as violently *Emettic* as the first; tho after nice trial, I could not perceive

ceive the Pouder diminiſh'd one Grain in Weight, or had, as before obſerved, caus'd the leaſt ſenſible Alteration in the Wine.

The *Cortex*, that noble Specific in all intermitting Fevers, I don't apprehend to perform its office either as an Alkaly or Acid; tho being mix'd with Acids, it dos its work much better than without 'em.

It is a general Complaint againſt that noble Medicin, and is the only occaſion of deterring ſom from the uſe of it, That being given in never ſo large quantities, eſpecially in *Quartans*, it only puts off the Fit for a time, but dos not totally eradicat the Diſtemper, which returns after a certain period. To obviat which Inconvenience I have bin adviſed to give it after the following manner, which ſeldom or never fails of preventing the return of the Diſtemper.

Two Hours before the Fit, I give a gentle *Emettic*; after that has don working, an *Opiat*: when the Fit is over, I give the quantity of a large Nutmeg of the following Electuary with the Decoction, and repeat it every 4 hours for five or ſix days, ordering my Patients to eat ſomthing of eaſy digeſtion within an hour after each Doſe. After five or ſix days, I give it only firſt in the Morning, and at five in the Afternoon for a Week, eating ſomthing after each Doſe.

℞ *Cort. Peruviani elect. Unc. unam*; *reducetur in pulverem impalpabilem &*

cum Syrupo Limonum, q. s. f. Electuarium.

Immediatly after each Dose I give about a quarter of a Pint of the following Decoction:

℞ *Cort. Peruviani elect. Unc. unam.*
Rad. Gentianæ Dracm. duas
Flor. Centaurii Pug. duos
Aq. Font. ℔ *quatuor,*
Bulliantur ad dimidiæ partis consumtionem, & coletur; colatura reservetur ad usum.

By this Method I have known three or four Ounces of the *Cortex* perfectly cure *Quartans* without any Relapse, after taking a Pound or more in the common Method, which has only put by the Fits for a time.

The Reasons, as I apprehend, why this method of giving it should be more prevalent than that commonly us'd, are; the Particles of the *Cortex* being very firm, the Medicin being taken, and the Patient fasting three or four Hours after it, it slides out of the Stomach into the small Guts, and so on: the small Guts being emty, there is not pressure enough to squeeze but a small quantity of it into the Lacteal Vessels; so that the greatest part of it is carried away as Excrement: But the Patient eating somthing of easy digestion, within so small a time as an Hour after it, that eaten, is turn'd into Chyle before the Particles of the *Cortex*

Cortex can be carried off; and the Chyle being of a viſcous Nature, retains the ſmall Particles, and carries 'em with it into the Blood: ſo that the Blood is more impregnated by one Doſe given this way, than with twenty Doſes without preſently eating after it.

To confirm the truth of what I have ſaid concerning the firmneſs of the Particles of the *Cortex*; if you boil it never ſo well, the clear Decoction will ſcarce cure a *Quotidian*, or *Tertian* Ague: wheras the *Cortex* after it has bin well boil'd, being reduc'd to Pouder, and given after the foreſaid manner, will cure a *Quartan*.

It would be a great Bleſſing to the Commonwealth of Phyſic, if there was a faithful Record kept of all the Cures wrought by ſimple Medicins, wherby Phyſicians might arrive to a certainty of curing more Diſtempers than that of Agues; which I never expect to ſee, ſo long as tedious, nonſenſical Compoſitions are depended on.

I don't remember any of the antient or modern *Botannic* Writers have mention'd the Leaves of *Aſſarabacca* to have any other quality than that of a violent Purger by Vomit and Stool: But Mr. *Pit*, a late eminent and learned Apothecary of *Worceſter*, my good Friend, told me, that he found it to be one of the moſt noble Purgers of the Head he ever knew, having a different Operation from any other Medicin he ever met with; that the ſnuffing up of three, four, or five Grains of the Pouder of

the dried Leaves at Night going to Bed, would on the Morrow, without disturbing rest that Night, but rather causing it, occasion the discharge of a vast quantity of serous Matter from the Glands of the Nose; nay, would somtimes last for two or three Days, without being in the least a *Sternutatory*.

By the repeated use of this Pouder alone, I have known the most violent confirmed Head-achs imaginable taken off, after they have eluded the efficacy of the most noble, celebrated *Cephalics*: But this ought to be minded, That whoever takes this Medicin, must confine themselves to their Houses, and keep as warm as if they had taken the most violent Purge.

I have bin told by a certain Gentleman, who uses a great quantity of the Pouder of this Herb among his poor Neighbors after the foresaid manner, that he was once induced to use it in a Deafness of long standing: he gave the Patient four or five Grains to snuff up into each Nostril every fourth or fifth Night, and order'd three Grains every Night to be blown with a Quil into each Ear; and in a Fortnight the Party recover'd his Hearing as well as ever.

Not long since I was told by a worthy Gentleman, that a Person who had bin deaf 14 Years, was induc'd to try whether the *Assarabacca* would do him any Service, and in a little time, using it after the forementioned manner, he was perfectly restor'd to his Hearing.

I could expatiate largely concerning simple spe-

ſpecific Remedies. But what I have ſaid is enough to ſatisfy the World, that I allow the Doctrin of *Specifics*; nay I think it ought to be lamented it is not more cultivated.

I have bin told by ſom intelligent Perſons, who have much convers'd with the Natives of *Weſt-India*, that the Doctrin of *Specifics* is mightily cultivated by thoſe barbarous People, wherby they have arriv'd to a certainty in curing moſt Diſtempers; and that to ſee People of 120, and 130 Years of Age, is as common, as in *England* to ſee People of 60. Now what a ſhame is it for us who live in a learned and inquiſitive Age, to be outdon by thoſe barbarous and illiterat People? Nay, for ought I know, the greateſt part of our Skill we had from them, or a People altogether as ignorant.

The Phyſicians of *Europe* are not arriv'd to ſo great a certainty in any thing, as in the cure of Agues; and who may we thank for that but the poor *Indians*, who imparted to us the uſe of their famous Bark?

From whence had *Hippocrates*, that Father of Phyſicians, his Skill, but by collecting the common Obſervations? which alone made him ſo famous throout the World. But the State of Nature is much alter'd in that long tract of time ſince he lived; and the difference of our Climat from that wherin he lived, makes his Obſervations not altogether hold good with us. So that if we will arrive to any certainty in our Art, we muſt make nice Obſervations of our own.

Helmont in his Treatise of Fevers says, *Quisque Artificum facit quod promittit, Statuarius nempe Statuam, Calcearius Calceos indubiè parat; solus autem Medicus nil audet ex arte spondere suâ, quia nititur Fundamentis incertis, per accidens duntaxat, subinde, atque doloſè proficuus.* Which is, that there is a certainty in all Professions but that of a Physician; and it is altogether our own Faults, for want of due Observation, that we act on such Uncertainties as we do.

But to return to the business of Acids; What great benefit dos Mankind in general receive from Mineral-Spring-Waters? All of which are allow'd to be Acids; and according to the difference of the Acid contain'd in 'em, they have different Operations. Som of them, as *Acton*, *Epsom*, *Dullidg*, *Northal*, &c. abounding with *Aluminous*, as well as *Vitriolic* Particles, work by Stool. Others, as *Tunbridg*, *Astrop*, *Ilmington*, &c. abounding with *Vitriolic* Particles only, are Alteratives, and generally carried off by Urin. The *Bath*-Waters, abounding with *Nitro Sulphureous* Particles, have a different Operation from any of the former, but are generally carried off by Urin, tho somtimes by Sweat.

There is scarce a Person laboring under any Chronical Distemper, or ill habit of Body, whose Fortune or Business will permit him, but at the proper Season is sent to one of the foremention'd Places; and I believe, to our no

great Credit, that more People are freed from Chronical Diſtempers by the uſe of Mineral Waters, than by all other Preſcriptions: Tho I am well ſatisfied that Mineral Waters, not properly taken, do frequently a great deal of Miſchief.

Beſides the ſervice don to Mankind by drinking Mineral Waters, what advantage accrues to many laboring under ſom ſort of Nervous Diſtempers, *&c.* by merely bathing in the Nitro-ſulphureous Hot Baths? But this ought to be obſerved, that the bathing in Hot Baths is only ſerviceable to thoſe whoſe Nerves are contracted; but in all Caſes where the Parts are relaxed, it is highly pernicious.

There is alſo a new way of Sweating by means of the Volatil Acid Steams ariſing from the evaporating Brine, in making Salt at our Engliſh Salt-pits, lately invented by Mr. *Henry Hodges* of *Droytwych* in *Worceſterſhire*, wherby ſeveral great things have bin don, even where the *Bath*, common *Hummums* and *Bagnios* have altogether proved ineffectual. I am ſorry I am where I cannot procure a number of Experiments to inſert in this place, which might be of ſervice to Mankind: but to ſupply their room, I ſhall add ſomthing don in a little Bathing-Houſe I erected of my own, wherin I imitated, if not outdid the way of ſweating at *Droytwych*; but my many Avocations hindred me from proſecuting it.

I procur'd som of the *Virgin-Salt* from the Salt-Rock in *Cheshire*; and, as I had occasion, dissolv'd a convenient quantity in Spring-Water, making a Brine as strong as that obtainable from the Brine-Pits; with this Brine I fill'd a large Iron Pot, which had Pipes of Wood that went from it to a little Room over-head, made convenient for People to sweat in: Under my Pot I made a fire, which both warm'd the Room, and made the Brine to boil; and from the boiling Brine arose such quantities of Steams as fill'd my Room, which, when warmed and full of Steams, was fit for use: I had, beside the large Pipes which supplied the whole Room, several others of different lengths, by the means of which I more forcibly conveyed the Steams to any particular part. By this way of Sweating, I knew a Gentlewoman cured, as was also one at *Droytwych*, of an inveterat Leprosy, which had eluded the Efficacy of all other Medicins and Baths. It rarely fail'd taking off the most violent old Aches and Pains. In all Relaxations of the Nerves and Tendons, I never met with any thing comparable to it. To be short, I found it as good as the Bath in most things, and in many outdid it; and I believe Mr *Hodges*, computing the time he used the way of Sweating at his Brine-Pits, and the number of People he had, can produce a greater Catalog, and more considerable Cures wrought, than have bin at the *Bath*.

*

But

But here it may fairly be objected, that I allow the bathing in Hot Baths to be only serviceable where the Parts are contracted, and pernicious where they are relaxed: Yet I commend the bathing in these hot Steams, as of admirable use where the parts are relaxed; in which there seems a plain Contradiction.

To which I answer: That while People are incompassed in the Steams, and sweating, there is a universal Relaxation of all the Parts; but the Steams proceding from the Dissolution of the Virgin Salt, which is full of Volatil Acid Particles, the parts being greatly relax'd in Sweating, are capable of receiving the said Particles into them, wherby, as soon as the sweating is over, they regain a greater Vigor and Contraction.

I hope by the means of Experimental Philosophy, so happily begun and incourag'd by that admirable, and never sufficiently to be valued Mr. *Boyl*, to see the Art of Physic arrive to as great a Certainty and Perfection as other Arts and Sciences. For, as I before observed, by chymically analyzing the Blood and Juices, both in their natural and morbid states, we may arrive to som certainty in the knowledg of the Cause of Distempers, of which I am afraid we have hitherto bin greatly ignorant; and when once their Causes are thorowly known, their Cure will not be difficult.

I shall conclude in the Words of that industrious Philosopher by the Fire, *Helmont*, in his Trea-

Treatise *De Lithiasi. In nostris furnis legimus, non esse in Natura certius sciendi genus ad cognoscendum per causas radicales & constitutivas rerum; quam dum scitur quid, quantumque in re quaque sit contentum. Ita quidem ut cognitio & connexio causarum, non constant clarius, quam cum res ipsas ita recluseris, ut coram prodeant, ac velut tecum loquantur. Siquidem entia realia, duntaxat stantia, in suis primordialibus, & succedentibus in seminum Principiis, adeoque in verâ entitate Substantiali dant notitiam, & proferunt causam cognoscendi Naturam Corporum, mediorum & extremitatum, Quippe sunt causæ generationis, existentiæ & permutationis, secundum ipsorum radicem, quoniam (teste Raimundo) utcunque Logicus habeat profundum ingenium Argumentabile, aut Naturale, de rebus extrinsecis; tamen nunquam per aliquam rationem quæ venit ad sensum, poterit directè cognoscere, nec judicari, cum quali natura, aut virtute, per fortitudinem intrinsecus, habeat Multiplicatio grani, crescere super terram, nisi pro similitudinario ab observatione desumto. Nec sciet unquam, quomodo semen in terra pullulet, crescat, & colligat fructum: Nisi cum doctrina experimentali prius intraverit in nostram Philosophiam Naturalem, & non Sophisticam sermocinalem illam, quæ nascitur Logicis, per diversas præsumtiones Phantasticas; qui cum prognosticationibus sequellarum, contra vim Naturæ, faciunt multos pertinaciter errare in Sophisticatione mentis. Quia per nostram mechanicam Scientiam, intellectus est rectificatus,*

ficatus, vi experientiæ, respectu oculi, & veræ notitiæ mentalis. Imo experientiæ nostræ stant supra probationes Phantasticas Conclusionum; ideoque nec eas tolerant: Sed omnes alias Scientias ostendunt vivaciter intrare in intellectum. Unde deinceps intelligimus per Naturam, intus illud, quod est, & quale est. Quia per talem Scientiam, intellectus stat denudatus superfluitatibus & erroribus, qui ipsum ordinariò removent à veritate, propter præsumtiones & præjudicata credita in conclusionibus. Hinc enim nostri se direxerunt ad intrandum per quamlibet scientiam (in omnem experientiam) per artem, juxta Naturæ cursum, in suis univocis principiis. Spagyria enim sola est speculum veri intellectus; monstratque tangere, & videre veritates earum in claro lumine. Nec fert argumenta logicalia, quia nimis remota & longinqua, de claro lumine. Ideoque habet tabula smaragdina: Per hoc genus demonstrandi, fugiet à te omnis obscuritas, & acquiritur tibi omnis fortitudinis fortitudo fortis, vincens omnia subtilia, & solida penetrans. Propterea vocor Hermes Trismegistus, habens tres (id est omnes) Partes Philosophiæ, atque totius mundi Telesmon; Hæc ille inter orare ergo & pulsare, supponitur Medium in Naturalibus, quærendi per ignem.

Some Farther

CONSIDERATIONS

Concerning

ALKALY and ACID,

Being an

APPENDIX

To a Late

ESSAY.

WHERIN

The Terms are made Clear, and the Natures of them more fully Explain'd.

Together with an Answer to the Objections rais'd against som Things contained in the Essay.

By JOHN COLBATCH, *a Member of the College of Physicians.*

The Third Edition, with som Additions.

LONDON,
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TO THE

Learned and Ingenious

Dr. EDWARD BAYNARD,

Fellow of the College of Physicians,

LONDON.

Honored Sir,

THE Civil and Gentleman-like Treatment I met with the first time I saw you, and the many Favors receiv'd from you since I was honored with your more intimat Acquaintance, embolden me to prostrate this Trifle at your Feet. I pretend not therby to merit any thing from you, but only to acknowledg the many Obligations under which I lie. It would be a Wrong to you for me to declare your Praise, your Merits being better known than I

am

am able to represent them. It was you, *SIR*, who were (for ought I know) the most early Cultivator of the Doctrin of Acids in the Cure of Diseases in this Nation; and the Success you have had in your Practice, sufficiently makes it appear, that you well understood what you went about, when you durst contend with the whole World, by treading in a new Path to aid and succor Life, in which few Physicians ever went before. *Macte! SIR*, in so great a Work as saving from the Grave; so shall the Name of *BAYNARD* not be known to the Widow, nor the Cries of the Fatherless entail Vengeance on your House. And would your Multiplicity of Business permit you to collect your own Observations, and make them public, I am sure the Mouths of all your Opposers would be for ever stopt, and their Errors cur'd by your healing Hand; for I know your Charity extends to Lunacy, as well as other Diseases: And none but the Moonsick can doubt so known and clear a Truth, as are the daily and most appa-

apparent Cures don by the happy Discovery of the use of Acids. 'Tis well known, *SIR*, that Nature and Art have sufficiently arm'd you for any Enemy, if such there be; tho your condonable Disposition is like the Sun, which shines even upon those Curs that bark at him. Your Pardon, *SIR*, I crave for this Trouble, and doubt not to meet with a Generous Acceptance and Protection from you; and if Dr. *Baynard* espouses my Cause, I care not who is against me. I assure you I bring no common Inclinations to serve you; neither would I by ordinary Testimonies express that Passion wherwith I am,

SIR,

Your most Humble, and

most Devoted Servant,

JOHN COLBATCH.

The PREFACE.

I Have so inquir'd into the Causes of Diseases, as to be altogether certain of the truth of my Hypotheſis already advanced, which I am now in som measure indeavoring to confirm: But I pretend not at all to have arriv'd to so much Certainty as by my Methods to make People Immortal, and that no Person shall die with whom I am concern'd, which is what I believe som have expected. But for my part, I shall always intirely submit to, and have respect for the Providence of God, who alone is the Author and Disposer of our Lives, and by the Mouth of an inspir'd Writer has declar'd, That our days are determined; and beyond the Bounds set by that wise Author of Nature we cannot pass: it being wholly impossible for Creatures to contend with their Creator, or to extend the Time that he has limited.

Physicians are of all Men, without doubt, the most unhappy; People in their Extremities looking on 'em as their Saviors and Deliverers: yet after all, when they have don what was in the power of Man to do, having in all respects acquitted themselves with the utmost Fidelity and Diligence, if their Patients die, their appointed time being com, and the number of days allotted 'em by the Almighty being expir'd, the Friends of the Deceased seldom fail to blame 'em in one respect or other, tho instead of that the Physician has deserv'd their utmost Favor and Esteem. By

By what I have said, I would not be understood to be so far a Predestinarian, as to believe Peoples Lives are not frequently prolong'd by the use of fit and proper Medicins: For if it were not so, why should the alwise Creator have bin at the trouble of providing such a vast number of Medicins in the Animal, Vegetable, and Mineral Kingdoms, if he did not design a real service to Mankind in distress?

God generally gives a Blessing to proper means, and dos not work Miracles every day. He teaches the Plowman to plow his Ground, and the Seedsman to sow his Seed: but the one instead of a Plow must not use a Harrow; nor the other expect to reap Wheat, if he sows Barly. So it is in the Practice of Physic; he that expects succes in it, must first indeavor to know the Causes of Diseases, then to use fit Remedies, and after that the Event must be left to the Almighty.

The Plowman may plow his Ground aright, and the Seedsman sow his Seed in due season, and after all they may reap no Crop: so the Physician may have an exact knowledg of the Causes of Diseases, and use the most fit and proper Medicins, and yet be frustrated in his Aim. Which ought to shew us what an exact reliance we should have on the Blessing of God in all our Indeavors, without which we are like to make but little progres in any thing.

I tread in an unbeaten Path, and therfore cannot so happily and easily arrive at my Journy's end, as if I had had som body or other to have chalk'd out my way.

I hope I shall not by these Indeavors incur the displeasure of those Physicians who are of a contrary Judgment to me, they being still at liberty to use their own Methods, and Alkalious Medicins: For tho we act on different Principles, our Ends and Designs, I hope, are the same, which are the Cure of Diseases; and if, after a multitude of Experiments, I am convinc'd that Acids are not the Causes of Diseases, but that Alkalies are, and on that score induc'd to use Acids in all or most Distempers, I see no reason why I should be reproach'd for it, since I have made no personal Reflections upon any one.

As for the Physicians of our own Nation, I have the highest Value and Esteem for them, having generally found 'em to be Men of greater Learning, and to understand the Business of their Profession better than most of the Physicians I have met with abroad.

Som

Som Farther

CONSIDERATIONS

Concerning

Alkaly and *Acid*, &c.

I Thought to have ſaid no more on this Subject till the Publication of my Hiſtory of *Human Blood*; but finding this to be of great difficulty, and that a larger number of Experiments than I at firſt thought will be neceſſary to make it complete in all its Parts, wherby it will be much longer than I at firſt intended before it appears in the World; I have therfore thought fit at preſent,

Firſt, To explain the Terms, or what is meant by *Alkaly*, and what by *Acid*; of which I find very many, who are not Phyſicians, in a great meaſure ignorant.

Secondly, To explain the Nature of 'em more fully and clearly than I have yet don.

Thirdly, To anſwer the Objections raiſed againſt ſom particular things in my *Eſſay*.

All which Heads I ſhall handle with as much Brevity and Perſpicuity as poſſible; omitting the fuller Proſecution of them to my Hiſtory

of *Human Blood*, which shall com abroad as soon as possibly I can, but I doubt it will be som years first.

I shall make bold to declare, That I have not publish'd this Doctrin of *Alkaly* and *Acid* out of a design to appear singular, or be the Head of a Faction, but of mere Compassion to Mankind, my Fellow-Creatures, whose deplorable Circumstances under mistaken Methods I have long bewail'd, to see Physic made the Scene of Slaughter, and so many miserable Mortals (the helpless Sick) sent daily to their last Homes, as Victims to Error and Ignorance; while the learned Prescriber jogs on in his old mistaken *Alkalious* Road, not dreaming, as the Wise Man says, *that Death is there, and that his Portion* (I mean the Patient's) *is with the Worms.*

But to return to my Business.

First, I shall explain the Terms, or what is meant by *Alkaly*, and what by *Acid*.

Alkaly derives its Name from the Herb *Kaly*, from whose Ashes is extracted a large quantity of Salt, which by the *Venetians* and others is much us'd in making Soap and Glass: this Salt they call *Sal Kaly*, and by leaving out the *S*, *Alkaly*. Now the Ashes of all or most Vegetables affording a Salt of the same nature with that of the Herb *Kaly*, therfore all *Lixivial* Salts are equivocally call'd *Alkalies*, as well as all other things of the same nature, whe-

whether manifeſtly *Saline* or not; ſuch as *Arſnic*, and all the *Teſtacea*, as *Pearl*, *Coral*, *Crabs Eyes*, *Oyſter Shells*, &c. and all *Urinous* Spirits and Salts, ſuch as Spirit and Salt of *Blood*, *Urin*, *Hartshorn*, &c. And ſom think, that of theſe Alkalies is made the famous *White Pouder*, ſo much talk'd of, which kills without a Bounce, and murders without making a Noiſe.

Acid, I ſuppoſe, did firſt derive its name from *Acaid*, an *Arabian* word for *Acetum*, Vinegar, which is the moſt common and known Acid; and therfore all things of the ſame taſte and nature are Acids: ſuch are the Juices of moſt Fruits and Plants in their natural ſtate, and unfermented; tho all fermented Vegetable Juices retain ſomthing of their priſtin Acidity, tho not in ſo eminent a degree. But every body knows that fermented Juices, ſuch as all ſorts of Wine, Ale, Beer, *&c.* let 'em be preſerv'd with never ſo much care, will at laſt return to their former ſtate of Acidity. All *Metalline* Sulphurs are to be rang'd among Acids, being nothing but a Congeſtion of Acid Particles. I may likewiſe without preſumtion reckon all ſorts of *Balſams*, and *Pinguedinous* and *Oleaginous* Subſtances, among the number of Acids; becauſe in the moſt bare and ſimple Diſtillation they afford large quantities of Acid Subſtances, but nothing Alkalious. *Bread* alſo, that is not without reaſon accounted the Staff of Life, affords by Diſtilla-

tion a large quantity of an Acid Subſtance, which is no deſpicable *Menſtruum*. *Sugar*, which tho in its taſte it ſeems to be nothing leſs than an Acid, yet by a Philoſophical Management appears to be nothing elſe but a Congeſtion of Acid Particles.

Thus for the preſent I think I have given a ſufficient account of what I mean by *Alkaly*, and what by *Acid*; and alſo what things are to be accounted *Alkalies*, and what *Acids*.

There are ſom things which ſeem to be of a mixt nature between Alkaly and Acid, which we call *Neutrals*. Now thoſe of this Tribe, which afford a far greater quantity of Acid Subſtances than Alkalious ones, I ſtick not to call *Acids*, becauſe the Acid predominates; and thoſe that afford a far greater quantity of Alkalious than Acid Subſtances, I call *Alkalies*: Tho in a ſtricter ſenſe they deſerve rather to be called either *Sub-Acid Alkalies*, or *Sub-Alkalin Acids*, according as either the one or the other predominates.

I ſhall now procede to the ſecond thing, which is, to explain the Nature of Alkalies and Acids more fully and clearly than I have yet don.

For the right performance of which, I ſhall compare the Operation of them upon Human Bodies, both internally and externally applied.

I shall begin with *Sal Kaly*, which is the Standard of Alkalies, and compare that with *Vinegar*, the Standard of Acids.

Sal Kaly, and so all Lixivious Vegetable Salts, as Salt of Wormwood, *&c.* being applied outwardly to the bare Skin, scorches and burns it, as if a red hot Iron was actually applied to it, causing an *Escar*, which falling off, an Ulcer follows: Nay, there is scarce any other Caustic used, than a *Lixivium* of *Sal Kaly*, which is what the Chirurgeons call Capital or Strong *Soap Lees*, evaporated to Driness. The same taken inwardly, without being greatly diluted by som Aqueous Vehicle, in most people causes enormous Vomitings, which I my self have formerly experienced; and tho never so much diluted, if it excites not Vomitings, yet rarely fails of depraving, palling, or totally destroying the Appetite: Besides, being conveyed into the Blood, by breaking its Globules, and spoiling its Texture, it causes either Scorbutes, Rheumatisms, Sciaticas, Consumtions, Gouts, Palsies, or som other of the fatal Tribe of Chronical Diseases.

Now I have shewn what *Sal Kaly*, and the rest of the Tribe of Vegetable Lixivious Salts will do; let us next see what effects even common plain Vinegar, which is the standard of Acids, will have, being externally and internally us'd.

It is well known that Vinegar externally applied, is of extraordinary use in many sorts of

of Inflammations, especially in an *Erisipelas*, or St. *Anthony*'s Fire. Clothes being dip'd in it, and applied to the Forehead and Temples, to the Wrists, the Stomach, and Bottoms of the Feet, I have experienced to be of singular use in som very burning Fevers: I have likewise (before I found out a more certain Remedy) us'd it with great success in violent Bleedings at the Nose, by dipping a Spunge in good strong Vinegar, and applying it to the *Scrotum*. I have also known it with good success us'd by poor people in stinking old Ulcers. From all which it appears, that being externally applied, 'tis no Caustic, and will make no Ulcer, but on the contrary, will cure Ulcers, ease Pain, *&c.* [Nay, in Scorbutic and Rheumatic Pains, there is scarce a better Medicin, especially if impregnated with Aromatics, and the parts well bath'd with the same Morning and Evening. This I have of late often us'd to the no small relief of People in great distress.]

Now we have seen som of its good Effects, being externally applied; let's see what it will do, internally taken.

First I shall mention an Account given of it by the Ingenious Dr. *Baynard*: He says he was call'd in to a Person who had a total Suppression of Urin, under which he had labor'd a considerable time, and that several things had in vain bin given him; he immediatly gave him a large Draught of Vinegar, which soon

soon made him piss freely; and by repeating it two or three times, he was perfectly freed of his Indisposition. The Doctor has given an account of this in one of the Philosophical Transactions; but I have not read it, nor have I time at present to look over those Papers. I think also he told me, that he did the same thing with it two or three times. He likewise gave me Instances of many Persons in most violent Fevers, who have bin presently cur'd by drinking large Draughts of *Atterpool* Water well acidulated.

I am also credibly inform'd, That Dr. *Bently*, a late famous Physician in *Cheshire*, who lived to almost a hundred Years, had such wonderful Success in Fevers, that he got the Name of the Fever-Doctor, and that his Medicin was nothing but the Decoction of a certain Herb well acidulated with the Spirit of—— a Noble Acid, which I am obliged not to reveal.

A worthy Lady, whose Name I must not mention, has assur'd me, that she has brought in the use of Vinegar, or Verjuice Posset-drink, in the Small-Pox, among her poor Neighbors in the Country where she lives; and where that has bin us'd from the beginning, she has scarce observ'd any one to die, or be disfigured; which agrees with what I observe in my *Essay*, p. 108.

I have likewise often remark'd, that three or four Spoonfuls of it will immediatly check the most

most violent Vomitings, occasion'd by the taking of som harsh *Antimonial* Medicins.

A great many other good qualities has simple Vinegar internally and externally applied (besides its being a good *Menstruum)* which I think not fit here to enumerat.

Som time since meeting with a Treatise of the Plague, written by one *Kemp* a Master of Arts (in all appearance a judicious honest Man) and finding in it a large Encomium of Vinegar, I could not forbear inserting it in this place. I shall not transcribe all he says of it, by reason it would take up too much room, but only what is most material.

'In the Works of several Physicians (says Mr. *Kemp)* 'there is often mention made of 'taking Vinegar, as it were by the by, in a 'small inconsiderable quantity, not for its own 'sake, but with other Medicins, as if it were 'only to help them down the better, and make 'them palatable: they will tell you that Vine-'gar is good with Cucumbers, and gives a 'pleasing relish to a Sallet; wheras in truth 'neither the one nor the other are good with-'out the Vinegar; it is not only wholsom in it 'self, but also makes other things so, and 'takes away their Hurtfulness. When you 'speak of this singular Liquor, away with 'cold Commendations, which argue rather 'a willingness to dispraise, than a readiness to 'commend: If it did whet ones Wit as 'much as sharpen ones Stomach, there could 'nothing

'nothing dull or flat be ſpoken of it. It is 'Food and Phyſic, Meat and Medicin, Drink 'and Julep, Codial and Antidote. Did you 'formerly taſte it but as common Sauce? Do 'you now eat it as a common Remedy. When 'you are well, it is a Preſervative from Sick-'neſs; when you are ſick, it is a Reſtorative 'to Health. 'Tis like Apparel, which you 'put on, not only for Comlineſs to hide Shame, 'but alſo for Warmth to keep out Cold. 'Tis 'like the Swords which the Gallants wear, 'not only for Ornament when they walk, but 'alſo for Defence, to fright a Thief when they 'travel, and ſlay an Enemy when they fight. '''Tis Reliſh for Sauce, 'tis Sauce for Meat, '''tis Medicin for Diſeaſes, 'tis Cordial for the 'Heart; and not only a Cordial for the Spi-'rits, but an Antidote againſt Poiſon; not 'only an Antidote againſt Poiſon, but againſt 'the Plague, the chief of Poiſons: So Vine-'gar is the chief of Antidotes, as the Sword is 'the King of Weapons.

'If you conſider the Plague as ariſing from 'the Corruption of the Humors (as indeed it 'is the ſupreme and higheſt degree of Putre-'faction) you may alſo take notice that no-'thing reſiſts it more. 'Tis Vinegar that 'keeps Fiſh, as Salmon, Oiſters, and the 'like (which otherwiſe would ſoon cor-'rupt) from Rottenneſs and Stinking: and 'if it would not do ſo much for Fleſh, 'why has it bin ſo much uſed for em-

'balming

'balming dead Corps? Nay it not only pre-
'ſerves, but recovers Fleſh from Corruption.
'Roaſt ſtinking Meat, and baſte it with Vine-
'gar, and it ſhall neither offend your Noſe nor
'Palat.

'If you conſider the Plague as a Poiſon, Vi-
'negar is an Antidote againſt it. Hence 'tis
'that Phyſicians, to ſuppreſs and take away the
'firy Venom of *Spurge*, *Laurel*, *Mezereon*,
'and other Plants, ſteep them in Vinegar, and
'ſo give them ſafely to their Patients; wher-
'as otherwiſe they would kill, and be a worſe
'Remedy than the Diſeaſe. Som have bin
'choakt by eating poiſon'd Muſhrooms; but
'had they taken a Draught of Vinegar, they
'had bin out of danger. *Dioſcorides* tells you
'it reſiſts all Poiſons hot and cold; and *Celſus*
'ſaith it is the moſt effectual Remedy againſt
'them; and tells of one poiſon'd by the Sting
'of an Aſp, who being at a place where there
'was no Liquor, and not able to go to another
'where any might be had, by chance found a
'Flagon of Vinegar, which he drank off,
'and preſently recover'd.

'Has the Plague taken away your Stomach?
'Vinegar will ſtir it up, and get you an Ap-
'petit to your Meat. Is your Throat ſcorcht,
'your Tongue black and chopt, and your
'Mouth ſore? Any ordinary Nurſe will tell
'you the Virtue of Vinegar, to make a Gar-
'gariſm, and waſh it. Are you like to be
'choakt with Phlegm? Syrup of Vinegar is

'a

'a common Medicin to cut it. Is your Brain 'loaden with Vapors, that you are like one in 'a Lethargy or dead Sleep? Let ſom Vinegar 'on a hot Iron be ſmoakt under your Noſe, 'and it preſently makes you awake. Are you 'pain'd in the Head, and troubled with tedi-'ous Watching? Wet a Roſe Cake or Cloth 'in Vinegar, and lay it to your Temples, 'and you may go to ſleep, and take your 'reſt.

At laſt he thus concludes. 'Tis for the Vir-'tue of Vinegar that I wrote this Book. I 'would be loth to preſent you with a Glow-'worm inſtead of a Diamond; or put a Bul-'ruſh inſtead of a Spear into your Hand, 'when you are to fight with ſuch an E-'nemy. Imagin well, and think highly of 'this Medicin. I value my own Life as 'much as another dos his: I had rather 'take Vinegar alone than many other, nay 'than any other ſingle Medicin without it. 'Deſpiſe it not, becauſe eaſy to be had; nei-'ther let it be contemned, becauſe familiar. 'It is the more excellent, becauſe common; 'the more precious, becauſe cheap: the Vir-'tues of it are ſo many, that they will hardly 'be believed; and therfore the greater, becauſe 'incredible.

This plain Medicin cannot be ſufficiently recommended for the uſe of poor People, eſpecially in inflammatory Diſeaſes, in moſt of which it has ſcarce a fellow; for which cauſe I

have

have transcrib'd what this honeſt Man has ſaid about it.

The next thing I ſhall do, will be to compare *Arſnic*, as the higheſt and moſt exalted Alkaly, with Oil of *Vitriol*, the moſt exalted Acid.

As for the external uſe of *Arſnic*, I know nothing of it experimentally; but it being of pernicious conſequence internally taken, I ſuppoſe it can have no friendly operation externally applied.

Internally taken, it cauſes the moſt enormous Vomitings and Convulſions of the Stomach, cold Sweats, Palpitations of the Heart, Swoonings, moſt violent Thirſt; and in general, ſeems to be a direct Enemy to Life, which in a ſhort time it fails not to deſtroy. All which effects it will undoubtedly have, given in never ſo ſmall a quantity. And all thoſe who have bin ſo vain as to pretend to correct the poiſonous, venomous Quality of *Arſnic*, ſo as to convert it into a good and ſafe Medicin, have attemted it only by the means of Acid Salts, ſuch as *Sea-Salt*, *Nitre*, *Tartar*, *Vitriol*, &c. wherin I cannot tell whether any has yet bin ſo happy as to ſuccede.

To prove *Arſnic* an Alkaly, and as ſuch the Cauſe of thoſe dreadful Symtoms that attend ſuch as are ſo unhappy as to take it, I ſhall inſert a Relation I had from Mr. *Payne* an Apothecary of *Brentford*, on Saturday, *Feb.* 16. 9⅝, which is as follows.

A young Woman of *Brentford* having taken a very large quantity of *Arsnic* (as he told me, an Ounce) was immediatly attended with the most violent Symtoms imaginable; on which Dr. *Morris* was called in, who gave her large Quantities of *Sallet Oil*, the usual Remedy, without the least abating the Symtoms: Upon which he order'd them to procure a large quantity of Lemons, and to press the Juice out of them; of which he plentifully gave her, which soon took off those imminent and direful Symtoms that inevitably threatned Death; tho the Operation of the Acid might be somwhat impeded thro the quantity of Oil she had taken before.

But to return to my Business, which is to see what are the effects of Oil of *Vitriol*.

I confess the Acid Particles of this Oil are so concentrated, as to make it unfit to be externally or internally applied of it self; but being diluted in a proper Vehicle, is a Medicin second to none that I know of. A few Drops in Canary given to the youngest Children troubled with Worms, seldom or never fail of having the desir'd effect. It being mix'd with Hony of Roses, is one of the best Medicins perhaps known for the Scurvy in the Gums, breeding Flesh where it is wanting, and fastening the Teeth. Being mix'd with Spring-water and Brandy, of each equal parts, to a moderat Acidity, it is no despicable Medicin, giving ease in the most tormenting Pains of

the Gout, the Part being fomented with it night and morning. I may be almoſt poſitive, that the Medicin us'd by the ingenious *Swiſs* Gentlemen who now reſide in this City, and are becom ſo deſervedly famous, is nothing but a mixture of Oil of *Vitriol* with a certain Oleaginous Body in due proportion. This Medicin rarely fails giving immediat Eaſe in the moſt torturing Pains of the Gout. Which confirms what I have ſaid in my Eſſay of the Gout, where I aſſert, that it is not from any Acidity in the Blood that the Gout is occaſion'd, but from Particles of a quite contrary nature, *viz.* Alkalious ones; as evidently appears by analyzing the chalky Subſtance contain'd in the Nodes.

In my Tract of the Gout I have given an account of the Preparation of the foreſaid Remedy, which is a very wonderful one, tho its Preparation be moſt eaſy.

A better general Medicin than Oil of *Vitriol* is ſcarce known in moſt continu'd Fevers; any ſmall Liquors, as Barly water, ſmall Beer, *&c.* being well impregnated with it, and drank freely.

I took ſom pains to tranſcribe what Mr. *Kemp* in his Treatiſe of the Peſtilence has ſaid concerning the Virtues of Vinegar: Oil of *Vitriol* being another of his Favorit Remedies in the cure of that worſt of Diſtempers, I ſhall alſo trouble you with a little of what he ſays concerning it.

'Take

'Take ſom Spring-water, and put it into a 'freſh Glaſs, and drop ſom Oil of *Vitriol* or '*Sulphur* into it to make it ſharp; then ſweet-'en it with Sugar, and drink it, both as a 'Preſervative againſt a Fever or the Plague, 'and as a Medicin and Julep in time of Sick-'neſs: and let me tell you, plain Spring-wa-'ter, and Oil of *Vitriol* or Brimſtone, is a 'better Julep in the Plague, peſtilent, ma-'lignant, and other burning Fevers, than al-'moſt any other diſtil'd Water without it.

'Note, It is a vain and ſcrupulous Error to 'take, when you are dry and burning hot, but 'two or three Spoonfuls of Julep at a time. I 'never denied my Patients Drink in the Heat 'of a Fever, but let 'em drink Julep as much 'as they pleaſe; for a little Julep dos but little 'good, and rather increaſes the Heat: as the 'pouring a little Water upon a Smith's Fire 'makes it flame the more, and burn the hot-'ter; wheras a great deal dos quite extinguiſh 'and put it out.

'And becauſe this Oil of *Vitriol* is ſo ex-'cellent and uſeful a Remedy mixt with Wa-'ter, in this and all hot Diſeaſes I ſhould ad-'viſe every ingenious Perſon that lives in the 'Country never to be without it.

'Theſe Oils you muſt underſtand cannot be 'taken by themſelves, but with Spring or di-'ſtil'd Waters; and you muſt be careful of 'ſpilling any Drop on your Clothes, for it will 'fret and make a hole in them. Now if you

'refuse to meddle with them for fear of receiv-
'ing any hurt, you may as well do so by Fire,
'which you must not sit by, lest a Spark light
'on your Apron; neither must Men take To-
'bacco for fear of burning their Faces: And
'yet I must tell you, it is better to have a Spot
'on your Gown, or a Hole in your Clothes,
'which the negligent slabbering of it may oc-
'casion, than a Purple in your Skin, or a Botch
'or Carbuncle in your Flesh, which the dis-
'crete taking it will hinder.

'*Minderarus* in his Book of the Pestilence,
'where he treats of Oil of *Vitriol* and Brim-
'stone (which are much the same) saith,
'There is no Putrefaction whose Strength it
'dos not break, no Infection it dos not over-
'com, no depravation of Humors which it
'dos not rectify. In truth, might I speak free-
'ly, if I should be hindred or forbid the use of
'Oil of *Vitriol*, I would never com to the
'Cure of the Plague; or if I did, I should
'com disarm'd.

Mr. *Kemp* wrote his Book of the Plague for the benefit of the Poor, in the Year 1665, when that dreadful Distemper rag'd in this City.

The following Mixture is a noble Medicin in that painful Distemper, the Stone in the Kidneys.

Take of Oil of Bitter-Almonds one Ounce, Oil of Vitriol *two Drams, Oil of* Sassafras *a Scruple;*

Scruple; mix them very well: then add Spirit of Wine rectified three Ounces; digeſt two or three days in a gentle heat. The Doſe is a ſmall Sweetmeat Spoonful in Old Hock, or Infuſion of Juniper-Berries, once in four hours during the Paroxiſm.

Given for a Month or ſix Weeks firſt in the Morning, and laſt at Night, in an Infuſion of Lavender Flowers, it is an admirable Medicin in Epilepſies.

I could mention many caſes more in which this Medicin is of ſingular uſe; but in ſo doing I ſhould too much ſwell this Appendix.

I ſhall next compare the *Teſtacea*, ſuch as *Pearl*, *Coral*, *Crabs Eyes*, &c. with natural Balſams and Gums, ſuch as Balm of *Gilead*, *Tolu*, *Peru*, &c. *Gum Ammoniacum*, *Galbanum*, &c.

As for *Pearl*, *Coral*, and *Crabs Eyes*, I know no uſe they are of at all externally applied; and being internally taken, no body that I know pretends they are uſeful any further than to abſorb the Acidity of the Stomach, where people labor under any Indiſpoſition attended with an Acidity there. But they are ſo far from being uſeful in that caſe, that I ſcarce ever knew 'em ſo: And in any other caſe they have not the leaſt ſhew of being uſeful, but frequently do a great deal of miſchief, as I have obſerv'd in my Eſſay on the Small-Pox, *&c.*

Here let me mention a ſhort Caſe related to me by Dr. *Baynard*, pertinent to this place.

A Merchant's Wife of ſom Eminence in *Briſtol*, laboring under a decay'd Stomach, was reduc'd to ſuch Weakneſs, as ſhe was not able to go, and vomited all ſhe took: Her Phyſicians ſuppoſing her Blood abounded with Acids, had loaded her weak Stomach with the whole Retinue of the Alkalious Kingdom, keeping their old Circle from the *Teſtacea* to the Volatil Alkalies, and from thence to the *Teſtacea* again; but at laſt ſhe was perfectly cur'd with a few Doſes of the *Gas Sulphuris* given in the *Bath* Waters cold, twice or thrice a day.

As for Balſams, ſhould I pretend to deſcribe their Excellences, it would be more fit for a large Volume, than to have any room in the Appendix to a ſmall Eſſay. What a noble Medicin is Balm of *Gilead* in many caſes? The Excellency of which is ſuch, that God by the mouth of an inſpired Writer, in way of alluſion, when his people were in a calamitous Condition, cries out, *Is there no Balm in* Gilead? *Are there no Phyſicians there* (to apply it)? *Why then is not the Wound of the Daughter of my People healed?* What a noble Remedy is *Ammoniacum* in the moſt deplorable Aſtma's? the Spirit diſtil'd from which, with an equal quantity of *Verdigreaſe*, in a naked Fire, I believe to be as rare a Medicin as ever was us'd; nay, all the Gums and Balſams freed from their

Ramous

Ramous Viſcous parts by Diſtillation, becom much better Medicins than when in their natural ſtate.

I ſhall ſay no more of Balſams, for fear of outrunning my bounds; but procede to anſwer the Objections rais'd againſt what I have ſaid in ſom parts of my Eſſay.

Object. 1. You ſay that the Scurvy is occaſion'd by too great a quantity of Alkalious Particles in the Blood, and is only cur'd by Acids. If ſo, how coms it that thoſe who live on nothing almoſt but highly-ſalted Meat, are more troubled with the Scurvy than others, when you own Sea-Salt to be an Acid?

Anſw. I own that Seamen, and ſuch as dwell by the Sea-ſide in Marſhy Grounds, who for the moſt part live on Salt Meat and Fiſh, are more troubled with the Scurvy than others. But this procedes not from their eating a larger quantity of Salt, but from eating more Fleſh and Fiſh than others do, which abound with Alkalious Particles, and from the moiſtneſs of the Air about 'em, which hinders their free Perſpiration. As for the Sea-Salt, which is in great quantities mix'd with their Food, that is all or moſt of it ſoon carried off by Urin, and with it ſom of the Alkaly too, which therby frames an *Armoniac* Salt, with which it is well known the Urin of ſuch Perſons abounds. Now what we call *Sal Armoniac*, is only a mixture of Volatil Alkaly and Sea-Salt. But

the Pores being shut by reason of the moisture of the Ambient Air, the Volatil Alkaly which should be discharg'd either by insensible Transpiration or Sweating, being pent in, causes all the Symtoms complain'd of by those Persons. To confirm which, it is well known that Seamen at Sea, or those who live in Marshy Grounds, can scarce be made to sweat by the most violent Labor. Now all who have bin so curious as to taste Sweat, know very well it has an Alkalious and not an Acid Taste: so that Sweating, or free Transpiration being hindred, the Blood must necessarily abound with too great a quantity of Alkalious Particles; all those that should have bin discharg'd by the cutaneous Glands being kept in it. And so I hope this Objection is answered.

Object. 2. In your Essay, p. 138. you allow that Acids in som Distempers do exorbitantly abound in the Stomach: Now how coms it, when there is so great a quantity of Acid in the Stomach, that the Blood and other Juices should be destitute of Acidity; there being no other way to convey any thing into the Blood or Juices, but thro the Stomach; and therfore with whatever the Stomach abounds, one would think it must necessarily be imparted to the Blood and other Juices?

Answ. I have before observ'd, *Nov. Lum. Chyr.* p. 14, 15. That there is no innat Ferment in the Stomach, but that the *Menstruum* us'd

to diſſolve our Food, and turn it into a nutritious Juice, is the Liquor that by chewing our Meat is ſqueez'd out of the Glands of the Mouth and parts adjacent, which by numerous Experiments appears to be an Acid. Nay, all or moſt of the noble *Menſtruums* I know, either in the Animal, Vegetable, or Mineral Kingdoms, are Acids. Now the Food being convey'd into the Stomach, and mix'd with the Volatil Acid Liquor of the Glands of the Mouth, is by means of the ſame diſſolv'd, and turn'd into a Subſtance fit for the Nutrition of our Bodies; a ſtate of Health ſuppos'd.

It is well known, that few are troubled with an Acidity in their Stomachs, but thoſe who uſe very little exerciſe, or whoſe Buſineſs diſpoſes 'em to a Sedentary Life; and by this means the Chyle when made, for want of Motion and Exerciſe (the Fibers of the Stomach alſo having loſt their Tone, and becom lax) is not ſoon enough carried out of the Stomach; and lying there too long, the greateſt part of it is turn'd into a Subſtance like the Ferment which at firſt diſſolv'd it. All who know the nature of Ferments, will readily agree with me in this, That it is natural to 'em to indeavor the Change of thoſe things they are mix'd with into their own nature.

Object. 3. But ſom will ſay, We can agree in what you have ſaid hitherto; but how will you

you clear your self of your own seeming Objection, That this Acid Substance shall be kept from being convey'd into the Blood, and so being the only Cause of many Diseases?

Answ. I have always observed, That those who complain of an extraordinary Acidity in their Stomach, do

First, Make Water often, and in large quantities.

Secondly, They are very Lean. And

Thirdly, They are for the most part very Costive.

All which Symtoms I shall indeavor to prove are occasion'd for want of the Acid Substance in the Stomach being convey'd into the Blood.

As for the first Head, Why people who complain of an Acidity in their Stomachs, make more Water than those who are destitute of it; the Reason I judg to be as follows:

The solid Food they eat, instead of being converted into that viscid, white Liquor, we call Chyle only, by means of too great a quantity of Acid, is over attenuated, and converted into a thin limpid Substance, and that in a short time; which Substance, by means of the Liver pressing on the Stomach instead of passing into the small Guts thro the *Pylorus*, is squeez'd into certain Vessels that pass from the bottom of the Stomach to the Kidnys, and so is carried off by Urin.

To

To prove there are such Vessels as pass immediatly from the bottom of the Stomach to the Kidnys, I shall transcribe a Passage of *Doleus*'s *Encyclopedia Med.* pag. 359, 360. speaking of the parts affected in the Dropsy.

'I suppose (says he) that Liquid Substances 'may be convey'd from the Stomach thro the '*Omentum* or Cawl, to the Kidnys; hence it 'is those Animals, who have no Cawl, make 'no Water, as may be seen in Birds and Fishes. 'To confirm which Opinion, I have dissected 'many Animals, always taking care before the 'Operation to gorge them with large quan-'tities of clear Water; and afterwards have 'dissected them alive: I have found the Sto-'mach as yet distended with the Water; but 'I pres'd the Vessels of the Cawl leading to-'wards the Stomach, which being cover'd o-'ver with Fat like the Milky Veins, were, to 'my no little satisfaction, very turgid: And 'forasmuch as in a living Body the Pores of 'the Stomach and other Passages are always 'more open than in dead ones, where all things 'are flaggy, and fall together, therfore the said '*Transmeation* is not at all to be wonder'd at: 'And, which is worth taking notice of, in those 'Hydropical People I have open'd, I have always 'found the Cawl either putrid, torn, or full 'of Tumors. The following Experiment has 'also much confirm'd me in my Opinion, *viz.* 'That there are Vessels to convey liquid Sub-'stances from the Stomach, thro the Vessels of

'the

'the Cawl, to the Kidnys. Not long since an 'experienc'd *Herniotomist*, or Cutter of Rup-'tures, of *Hanover*, whose Name was *Wed-'ling*, by Section cur'd a certain Person of an '*Omental* Rupture; and because a part of the 'Cawl was also cut away, the Patient who is 'yet alive, dos greatly complain of a difficulty 'in making Water; and if at any time he 'drinks any large quantity, he perceives a 'great Weight and Pain about his Stomach, 'and is always loose: hence, in my conjecture, 'som Vessels which carry the Urin right on 'to the Emulgents, were cut, by which 'means all he drank was carried into the *Duo-'denum*, and so hinders the Fermentation there 'perform'd, and makes all the Fibers lax. 'From all which may be prov'd, that all we 'drink, and of consequence all other Substan-'ces made very liquid in the Stomach, do not 'pass thro the Intestins to the Lacteal Veins, 'and thence thro the Thorachic Duct to the 'Heart, because the *Pylorus* is reflex to the 'Stomach, lest the liquid Substances con-'tain'd in it should slide out. It is therfore cer-'tain that liquid Substances lying at the bot-'tom of the Stomach, pass thro it in that part 'join'd to the Cawl: and if these Vessels, or 'the Cawl it self, are either lacerated, broken, 'putrified, or obstructed with *Oedematous* Tu-'mors, it necessarily follows that the liquid 'Substances in the Stomach must be let fall 'into the Cavity of the *Abdomen*, and so a

Drop-

'Dropsy is caused. But being free from any 'such disorder, liquid Substances must freely 'pass thro them to the Kidnys, and so to the 'Bladder. I could cite other Authorities besides my own Observations, as Sir *George Ent*, *Charlton Waldsmiedght*, &c. but this one I think is sufficient.

From this Doctrin may very great Consolation be afforded to People laboring under the Stone in the Kidnys and Bladder; and industrious Physicians need not despair of finding out such Medicins as will dissolve or break to pieces Stones contained in either of those parts. One great reason I believe that has hindred Persons from making diligent search after such Medicins, has bin a supposition that scarce any Medicin could retain its Virtue, but must be in great measure, or altogether destroy'd by the many Alterations it must undergo, according to the ordinary Laws of Circulation; but were they fully satisfied (as there is no reason to the contrary) of this nearer Cut, I suppose people would not think the dissolving Stones in the Kidnys and Bladder so difficult a Task as it has hitherto bin thought to be.

[I have known several that have long labor'd under the Stone in the Kidnys, who by taking such a quantity of *Cremor Tartar* and well acidulated *Tartarum Vitriolatum* every Morning in a Dish of Water-gruel for 3 or 4 Months together, as would just keep them lax, and drinking fifteen or twenty Drops of dul-

dulcified Spirit of Salt two or three times a day in any convenient Vehicle, to have bin perfectly freed from all their troublesom Symtoms.]

To prove the Existence of the foresaid Passages for fluid Substances from the Stomach, thro the Vessels of the Cawl, to the Kidnys, and that Medicins may pass unalter'd to the Kidnys and Bladder, I shall insert two Cases.

One Mr. *Bradford*, an eminent Tradesman of *Worcester*, sent to me one Afternoon, desiring me to make all possible haste, for that he was on the Rack: When I came, I found him in a most dreadful condition, he not having made Water two days, and such an intolerable Pain in his Back, that he was not able to support himself under it. I presently gave him som Medicins, ordering him to take them in large quantities once in half an hour. In an hour and half at fartheſt, he sent to acquaint me that he was well, and at ease, having pist two large Chamberpots full, which held at least two Quarts apiece; and in the first Pot above two large Spoonfuls of small pieces of broken Stones. He has bin several times since, thro hard drinking, under the same Circumstances; and taking the same Medicins, has found immediat relief. Now had these Medicins bin convey'd from the Stomach to the small Guts, and thence by the Lacteal Vessels to the common Receptacle of the Chyle in the Mesentery, and so on to the Blood, and from thence bin separated by degrees in the Kidnys, as it

is

is brought there by the Emulgent Arteries, it had bin altogether impoſſible the Effect could have bin ſo ſudden, and the Medicins not greatly alter'd, or totally deſtroy'd, by the many changes they muſt have undergon before they could com to the part affected. But by the way of which I have bin ſpeaking, the Medicins might all of them, without being in the leaſt impair'd in their Virtue, be tranſmitted to the Part affected, and ſo perform their Operations in breaking to pieces the Stone or Stones they met with either in the Kidnys or Bladder.

Mrs. *Wheatly*, a Glaſier's Wife without *Smithfield-Bars*, had a long time bin afflicted with the Stone in the Bladder, and for about nine Months had confin'd her ſelf to her Chamber: the Miſery ſhe underwent was ſuch, that it made her altogether uncapable of buſineſs; and ſhe deſpair'd of ever being delivered, all common means having in vain bin us'd: at laſt ſhe was prevail'd with to ſend for me. When I came, ſhe gave a lamentable account of her Caſe; and tho I incourag'd her as much as poſſible, yet all I could ſay made but little impreſſion upon her: however, ſhe was at laſt prevail'd to try what I could do. I began to give her ſom Medicins, which ſhe took in large quantities, and repeated 'em once in four hours: it was on a Monday morning ſhe began to take them, and on the Wedneſday night following I examin'd her Water, and found

found ſom ſmall ragged Pieces of Stone in it; and taſting the Water, I could diſcern the Medicins, which were Salino-ſulphureous ones, to be as vigorous altogether, as they were before ſhe had taken them, and not, as I could diſcern, in the leaſt alter'd in their taſte. On Thurſday Morning by five a Clock, ſhe ſent her Maid-Servant to acquaint me that ſhe was deliver'd from her Miſery, and perfectly well. About eight a Clock I went to viſit her, and found a Stone ſhe had voided with little pain; the Medicins having acted upon the *Sphincter* Muſcle of the Neck of the Bladder, and ſo relax'd it, as to make it give way for the Stone to paſs: The length of the Stone was an Inch and half and half a quarter; it was three Inches and half round one way, and two Inches and a half another. There were ſom ſmall Flaws in it, which were made by thoſe little ragged pieces that came away the Night before, which I found in the Chamberpot. The thing was ſo extraordinary, that it came to the Ears of her late Majeſty, who deſir'd to ſee the Stone, which I procur'd for her; and ſhe was pleas'd to ſay, *That it was the moſt extraordinary thing ſhe had ever ſeen or heard of, to be brought away without Cutting or Inſtruments.* He who doubts the Truth of this Relation, may yet ſee the Stone at Mrs. *Wheatly*'s, who carefully preſerves it: The extraordinary Veracity and Integrity of the Perſon is ſuch, that I am ſure ſhe would not tell an Untruth to do any Man ſervice.

I

I could give other Instances of this nature; but these two, I think, are sufficient, and a plain Demonstration that there are Vessels which carry fluid Substances immediatly from the Stomach to the Kidnys, without those many Circumgyrations that people generally imagin; nay, I question not but suddenly to make it appear by ocular Demonstration: which if I could not do, yet to people who are not mere Sceptics, Demonstrations deduc'd from reiterated Experiments will be sufficient.

As a further confirmation of the Existence of these Urinary Passages, I shall presume to add a couple of Relations I had from Dr. *Yarborough* of *Newark* in *Nottingamshire*.

'I was (says the Doctor) sent for to a 'Gentleman who liv'd at som distance from 'me, and for a considerable time had labor'd 'under an *Ascites*, his *Abdomen* being distend-'ed prodigiously, and having all the Symtoms 'of a true *Ascites*. The first Night I came, I 'gave him a large Dose of *Tartarum Emetti-'cum* (for by the way, common Doses of *E-'mettics* won't work at all with Hydropical 'People) and sat by him to see it perform its 'Operation: after I had sat near two hours, 'and my Patience almost tir'd, he told me he 'was confident there was a mistake, and that 'I had given him a Cordial instead of a Vomit. 'To which I replied, I was sure of the contra-'ry, that the Medicin was right and good in

'its kind. About half an hour after he called for 'a Chamberpot; but instead of vomiting, he 'pist a quart or two, and before the next Night 'had discharg'd all the Water contained in his '*Abdomen*.

The second Relation was of a Maid who was under the same Circumstances with the foremention'd Gentleman; to whom, instead of *Tartarum Emetticum*, he gave a large Dose of Infusion of *Crocus Metallorum*, which had the same effect upon her as the *Tartarum Emeticum* had on the Gentleman.

These Relations were made before Dr. *Baynard* and several other Gentlemen, the truth of which he did affirm with all the Solemness imaginable.

I confess an *Ascites* is one of the stubbornest and most difficult Distempers to be overcom of any I know: and I should be heartily glad, for the sake of those miserable People who are afflicted with it, that the foremention'd Method would always have the same success; which Dr. *Yarborough*, thro the whole course of his Practice, never saw it have, only in the two here mention'd. However it seems impossible that these Persons could have bin so suddenly reliev'd, were there not a more immediat Passage for the Water in their Abdomens, than by the ordinary ways of Circulation thro the Blood-vessels; and the reason of Dr. *Yarborough*'s relating these Cases, was to confirm me in my Opinion of those nearer Passages.

[In

[In the Months of *Auguſt*, *September*, and *October* of this preſent Year 98. I have bin concern'd with three Perſons, who had the misfortune to labor under the foreſaid dreadful Diſtemper; and conſidering that evacuation by Urin was the only one that could relieve them, and that the *Omentum* was a part greatly concerned in this matter, and alſo that by proper Fomentations it might not be impoſſible to remedy the Diſorders of it, I preſcribed ſuch as then occurred to my mind, and by the repeated uſe of them, together with other proper internal Medicins, two of the three were made to piſs plentifully, and are paſt danger; and of the third I am not in deſpair. After further trial, if the ſucceſs continues to anſwer my expectation, the World ſhall certainly be fully inform'd of it.]

The Learned and Ingenious Dr. *Baynard*'s Account of the ſudden Effects of Vinegar before-mention'd, in a total ſuppreſſion of Urin, is alſo a good Argument to evince the truth of what I have bin here ſpeaking. But to proceed to my ſecond Head, which is,

That thoſe who abound with an Acidity in their Stomachs, are generally very lean.

To prove which Poſition, will be no difficult Task; for the ſolid Food they eat (and generally they have good Appetits) which affords moſt Nutrition, being over-attenuated, is therby made capable of paſſing thro thoſe Veſſels I have before mention'd (which I ſhall

preſume to call *Urinary* Veſſels) the more groſs parts only being convey'd to the ſmall Guts; which having but few nutritious Particles in them, can afford very little Nouriſhment to the parts, which being deſtitute of their uſual and neceſſary Nouriſhment, Leanneſs of conſequence muſt follow.

A ſufficient Argument to prove that Leanneſs procedes from the want of a ſufficient quantity of Acid Subſtances in the Blood, is this: That Fat is nothing elſe but a Concrete, produc'd from the Mixture of the Acid and Oily Parts of the Blood. Now the Blood has never any Acid in it (at leaſt not in abundance) but when People are in a perfect ſtate of Health: and when the Blood is deſtitute of a ſufficient quantity of Acid Particles, and abounds too much with Alkalious ones (which argues a morbid ſtate) as it dos in thoſe who have too great a quantity of Acid in their Stomachs, which upon experiment any man may find to be true, tho at firſt ſight, I confeſs, it looks like a Paradox; I ſay, when the Blood is deſtitute of a ſufficient quantity of Acid Particles to coagulat the Oily ones, there can be no freſh production of Fat; and that already generated having its Acid Particles mortified by the great quantity of Alkalious ones, preſently loſes its conſiſtence, and is again converted into a thin Oil, which is ſoon carried off by ſom of the Emunctories, there being nothing in the Blood fit for it to incorporat or mix with:

with: and when these oily, fat Particles are gon, the corrosive, alkalious Particles prey upon the musculous, nervous Fibers, and cause general Disorders: at other times when in great quantities thrown upon particular Parts, according to the nature of the part affected, they cause different Diseases. But I know no Disease caused by Acids, unless it be over much Fatness, and what we call *Heartburn*, if they are to be accounted Diseases, the most healthy People being subject to the latter; tho the Heartburn is as often cur'd by Acids, such as *Ol. Vitriol. dul.* &c. as by Alkalies. From whence I conjecture, that the Heartburn also may be occasion'd from the Blood brought to the Coats of the Stomach, abounding with too great a quantity of Alkalious, Corrosive Particles, which may vellicat and contract the part. Having in short dispatch'd this Head, I shall procede to my third:

That those who abound with an Acidity in their Stomachs, are for the most part very Costive.

From the same reason that people abounding with an Acidity in their Stomachs are lean, it is that they are costive also; the more thin, fluid Substances being carried off by the Urinary Vessels, and only the more gross ones conveyed into the Guts: and for want of a sufficient quantity of Moisture, the Excrements are over-hardened. and the Guts not sufficiently lubricated; and therfore Costiveness must necessarily follow.

But after all, I foreſee another Objection will be rais'd; and therfore to make every body eaſy, I ſhall indeavor to anſwer it.

Object. If the Acidity in the Stomach cauſes the ſolid Food we eat to be over-attenuated, and ſo the nutritious Particles to be carried off by the Urinary Veſſels, as in *Atrophies*, &c. without being convey'd into the Blood, to afford Nutrition to the parts; how coms it to paſs that Iron or Steel, which you own to be an Acid, can be of any uſe? For inſtead of being uſeful, one would think by increaſing the Acidity, it ſhould exaſperat and increaſe the Malady.

To which I anſwer: I have before obſerv'd, that Iron or Steel cannot be convey'd into the Blood before it is turn'd into a Vitriol; and therfore to thoſe who have a great Acidity in their Stomachs, it is found abſolutely neceſſary to give it without any precedent Preparation; which has bin long ſince obſerv'd by the Learned and Judicious Dr. *Cole*, in his Phyſico-Medical Eſſay concerning the late Frequeney of Apoplexies. Now Iron or Steel given crude and unprepar'd, is by the Acid in the Stomach turn'd into a Vitriol; wherby the Acid is ſo embodied, as to make it uncapable of paſſing thro the almoſt imperceptible Urinary Paſſages, and likewiſe to hinder it from overmuch attenuating the Chyle; ſo that being mix'd with the Chyle, they are together convey'd into the ſmall Guts, and ſo on to the

* Blood:

Blood: and by its Stiptic Acidity it confirms the Texture of the Blood, and mortifies the luxuriant Alkalious Particles it meets with. [And for the relief of those who over-much abound with an Acid Juice in their Stomachs, I belive there is scarce any thing can outdo the Iron Bullets before taken notice of in this Edition of the Essay.]

As for what I have mention'd concerning the Efficacy of Juice of Lemons, in immediatly abating and taking off the violent Symtoms that attended a Person who had bin bit with a Viper, after the Volatil Salt of Vipers, and other Antidotes had in vain bin given; I find the very same thing taken notice of by *Hoffman* in his *Clavis Pharmaceutica Schroderiana*, pag. 444, 445. [But for a further illustration of that matter, I refer you to my account of the Cure of the person bit by a Viper.]

An ingenious Person not long since, who had formerly imbrac'd the Doctrin of Acids, was willing to try what Effects the Transfusion of Acid and Alkalious Liquors into the Veins of Dogs would produce: accordingly he injected som Oil of *Sulphur per Campan.* into the Veins of one Dog; which instead of disordering him, made him brisk and lively, and very hungry: But in another Dog, into whose Veins som Oil of *Tartar per Deliquium* (a known Alkaly) had bin injected, it produc'd a clear contrary effect, the Dog being lumpish and dull, and dying in a few days. But it is

to be obſerv'd, that theſe two Liquors were ſo diluted, as to make 'em fit to be taken at the Mouth, before they were injected. Somthing (as I remember) of this nature is taken notice of by *Fred. Hoffman, Fil. de Acido & Viſcido.*

I have bin aſſur'd by a Perſon of the greateſt Honor, that the *Jews* in *Conſtantinople* (who are the only Phyſicians there) adviſe their Patients, when the Plague rages, to eat Lemon and Sugar, and to drink Lemonade in large quantities, and that by way of prevention; and thoſe who do ſo, ſeldom or never have the Plague: And when they are call'd to Perſons who have it, if they take but the foreſaid Medicins in large quantities, they very rarely miſcarry.

From many late Obſervations I am fully convinc'd, that the Gout is without any great difficulty to be cur'd, or at leaſt a Fit to be taken off in a ſmall time, by a proper Courſe of Acid Medicins, both internally taken, and externally applied to the Part affected, and that without the leaſt Inconvenience afterwards: And I am certain, the only reaſon why people have hitherto ſo fruſtraneouſly attemted the Cure of that Diſtemper, is the general Prejudice they have had againſt Acid Medicins, which are only capable of doing ſervice.

Tho I contend ſo mightily for the uſe of Acids in general in the Cure of Diſeaſes, yet I pretend not in the leaſt that any one Acid is

capable

capable of anſwering a Phyſician's Intention in all Diſeaſes: Neither Vinegar nor Lemons are to be reckon'd *Panaceas*; tho, for ought I know, in the hands of one who well underſtands their uſe, they will either of 'em do more than many of the celebrated *Panaceas*.

No man is fit to be call'd a Phyſician, who dos not well underſtand the Nature of Diſeaſes, and of the Juices contained in a Human Body, which has hitherto bin but little inquir'd into; Men taking up with general Notions that had no Foundation, which has caus'd Phyſic to be ſo long practis'd without the leaſt certainty; Phyſicians changing the Method of their Practice almoſt as often as we do our Clothes. Being well skil'd in the Anatomy of the ſolid Parts, is a noble Qualification, and inables a Man to talk finely; but dos not in the leaſt tend to inable men to cure Diſeaſes. It is an exact Skill in the Anatomy of the Juices, the fluid Parts, that will make a Man a good Phyſician; but in this ſort of Study few have bin converſant. An exact knowlege of the *Materia Medica* in general, and the ſpecific Differences between thoſe Medicins, ſeemingly of the ſame Tribe, is alſo abſolutely neceſſary: For that Acid that will cure a Fever, may not cure the Gout; and that which will cure the Gout, may not perhaps cure another Chronical Diſtemper; there being a vaſt difference between thoſe very Medicins which are ſeemingly the ſame.

I do positively affirm, That neither Blood, nor its *Serum*, by being any way that I know of expos'd to Putrefaction, will in the least becom Acid, but rather more Alkalious. Now Acids in general hindring Putrefaction, and reducing putrid things to a state of Soundness, must be the great Medicins to cure Diseases; for there is no Disease but procedes from som sort of Putrefaction of the fluid Parts of our Bodies.

What I have said in my *Essay*, and also in this *Appendix*, has bin only in general terms; but I am now reducing all to a Method, designing my *History of Blood* to be also a Methodical History of Diseases, with an account of the proper Medicins for their Cure; and being resolv'd to serve my Generation to the utmost of my power, let my treatment be what it will.

[As I before said, so I repeat it again, that upon many Reviews and serious Consideration, I have thought fit at present to lay aside my *History of Blood*; for to make it perfectly complete, requires so much charge, that it is more fit to be don at the expence of the Public, than by any privat Person: however, I hope to have it finish'd by one means or other before I dy.]

I shall conclude this Appendix with two or three Cases, and the Method I used in the Cure of 'em, to confirm the Truth of som things in my *Essay*.

Case

Case the First.

A Gentleman had labor'd under a *Sciatica* for two or three Years, and applied himself to Physicians of the greatest Eminence for Advice, and by their Prescriptions bin loaded all that time with Alkalious Medicins, without receiving the least advantage; having his left Leg and Thigh greatly emaciated, and a very large Glandulous Tumor on his Hip: He was never free from violent Pain, and being very lame. I first purg'd him well for a Fortnight with *Calamel. Tart. Vitriolat.* and *Rezin of Jallap*: I afterwards gave him the following Medicins, which he took constantly three times a day for about ten Weeks; in which time, without any external Application at all, his Pain left him, the Tumor disappear'd, and his Leg and Thigh, which were before wasted to mere Skin and Bones, became equally plump and fleshy with the other. [And to this day he continues well, it being at least five years since the Cure was wrought, and has never had the least return of his Distemper.]

℞ *Cinnabaris Antimonii, vel (quod melior est) Factitiæ Com. Officinarum recenter levigat. unciam unam; Gum. Guaiaci dracmas sex; Conf. Cynosbati uncias tres; Syr. Sambuci q. s. f. Electuarium. Dosis est quant. Nucismoscatæ ter in die,*

die, horis medicinalibus, ſuperbibendo uncias octo Infuſionis ſequentis.

℞ *Rad. Bardanæ ſiccat. & groſſè contuſ. uncias octo; Baccar. Juniperi, unciæ quatuor ſem. Bardanæ, Fraxini, ana unc. unam ſemis; Saſſafras unciam unam; Tartari Vitriolati dracmas tres; Aq. Font. ℔ ſex. Infunde clauſè & calidè per horas* xii. *& coletur, colaturæ ſing. libris duabus. Adde Sp. Liq. Guaiaci Rect. unciam ſemis. M.*

This Method I have ſo often experienced in this Caſe, that I dare recommend it to be generally depended upon.

Caſe the Second.

A pretty young Gentleman, who had bin too free with the fair Sex by his over frequent Embraces, was poxt to the higheſt degree, being leprous from the Crown of his Head to the Soles of his Feet, and had all other Symtoms of the moſt confirm'd Pox I ever met with. He was altogether averſe to Salivation; I therfore gave him the foreſaid Medicins, which he took three times a day for about two Months: but I firſt purg'd him well with *Calamel. Tart. Vit.* and *Rezin Jallap.* and for the laſt Fortnight ſent him to the *Bagnio* three times a week, ordering him to take a large

Doſe

Doſe of the Electuary and Infuſion about an hour before he went in. At two months end he was perfectly freed from his Leproſy, and his Skin as clean and white as ever I ſaw any one's in my life, and all other Symtoms that attended him were perfectly vaniſh'd.

Caſe the Third.

A Corporal in the Right Hon. the Earl of *Oxford*'s Regiment, was pox'd to the higheſt degree; on which he applied to a Phyſician near *Chelſy*, who put him into the poudering Tub of Affliction three times; and tho each time he underwent a regular Salivation, his Symtoms were not in the leaſt abated. He was ſo emaciated, that he was like a mere Skeleton. He had violent Pain in his Head, Shoulders, Arms, Thighs, and Shinbones; and when he was warm in Bed, the Pain was ſo exaſperated, that tho he was ſcarce able to ſtand, yet out of his Bed he was forc'd to get, and crawl about in the cold, which afforded him ſom ſmall Relief. His Appetit was quite loſt, and he had a continual Hectic upon him. To be ſhort, I think I never ſaw ſo miſerable a Spectacle in my life. I gave him the Electuary and Infuſion thrice a day, which ſoon abated the violence of the Symtoms; and continuing to uſe them about three months, tho he had ſeldom leſs than four or five Stools a day, he gather'd Fleſh, and in that time became

came a hale hearty Man, to the ſurprize of all who knew him. I may be poſitive it was not above ſix Weeks before he was able to walk about his buſineſs.

I have given theſe Medicins I believe to two hundred People in ſeveral Chronical Diſtempers, with extraordinary ſucceſs: And tho in the day-time they ſeldom fail of working three or four times by Stool, and in the night provoking Sweat; yet I have ſcarce known any who have taken them, that during the time of their taking, for all the great Evacuations they cauſe, have not ſenſibly gather'd Fleſh, and if weak, recover'd Strength. Wheras let the ſtrongeſt perſons take any of the common Purgers but a month together; and tho they have not above two or three Stools a day, yet they will emaciat and weaken them to a great degree: which is a great Argument of the excellency of *Cinnaberin* Medicins mixt with *Gum Guaiaci* above the common Purgers; the one carrying off the nutritious as well as the excrementitious Juices, the other only cauſing a due ſecretion of the noxious excrementitious Juices: by which Nature is rid of any Load wherwith ſhe is oppreſt, and inabled to apply the nutritious Juices to the ends for which they are deſign'd.

I have in extraordinary Caſes given above a pound of *Cinnaber* at times to one perſon, and never knew the leaſt ill Symtom follow, nor ever once to excite Salivation: and I verily believe,

lieve, in the hands of one who knows how to uſe it, it is one of the greateſt Medicins in Chronical Diſeaſes in the World; but being us'd with *Gum Guaiaci*, and *Spiritus Guaiaci rect.* it dos much better than alone, they greatly aſſiſting in its Operation. Being mix'd with proper Cephalics, and taken for ſom time, it is a wonderful Medicin in Epilepſies, and other nervous Diſtempers. *Hoffman* has wrote a whole Treatiſe of *Cinnaber*; and I could ſay ten times more in its praiſe from my own Experience, than *Hoffman* has don.

Children are frequently troubled with Convulſions, more of 'em dying of that than of all other Diſtempers. Teſtaceous Pouders are generally given, as the great *Aſylum* to which Phyſicians fly, but rarely with Succeſs. But giving 'em temperat Acids mix'd with proper Cephalics, I have generally found 'em to anſwer my Intentions.

I was not long ſince ſent for to a Child who had Convulſions to ſuch a degree, that his Parents believ'd it to be an Epilepſy. His Belly was hard like a Stone, and he had continual Tortions and convulſive Contractions, ſomtimes of his Hands and Arms; ſomtimes his Legs and Thighs would be diſtorted, and almoſt out of Joint; ſomtimes he had the moſt violent Vomitings, and at other times the Muſcles of his Face would be ſtrangely contracted. I gave him the following Medicins, and in about two days he was free from his Con-

Convulsions, and in a fortnight's time perfectly well.

℞ *Tart. Vitriolati dracm. unam; Crem. Tart. dracmas duas; Castorei dracm. semis; Sacchari albi unciam semis. M. f. Pul. in* viii *Chart. distribuend. ex quibus cap. n°* 1. *quartâ quâque horâ in Cochlear. Julap. seq. superbibendo Cochlear. tria vel quatuor ejusd.*

℞ *Aq. Rorismarini, Pulegii, ana uncias tres; Peon. Comp. uncias duas; Ol Vitrioli Dul. scrupl. unum; Syr. Peoniæ dracmas tres. M. f. Julap.*

℞ *Ol. Amygdalar. Amar. unciam unam; Ung. Dialtheæ uncias duas; Ol. Anisi, Pulegii, ana gut.* vi. *M. f. Linimentum, cum quo illinatur Regio Umbilicalis manè & vesperi, superponendo Pannum laneum ter duplicatum.*

By this Method, with som variation, according as different Symtoms appear, I have known multitudes of Children, whose Lives have bin despair'd of, cur'd of the most violent Convulsions in a small time.

I have likewise observ'd, that in malignant Fevers, those who are treated according to the usual custom, with Alkalies and *Alexipharmics*, are generally attended with violent Convulsions:

violent Convulsions: But those who use Acids plentifully, are seldom or never convulsive.

I have cured many of that troublesom Cough that has rag'd this *March*, by only giving large quantities of Lemon and Sugar, to be eaten day and night; and an Opiat with som Drops of Oil of Sulphur *per Campan.* at night going to Bed.

In violent Hysterical Fits in Women, I have frequently (seldom failing of success) given a mixture of two or three Spoonfuls of Vinegar, a few Grains of *Castor*, and about a quarter of a pint of Spring Water: Which has frequently abated and taken off the Fits, tho before greatly exasperated by Spirit of Hartshorn, *Sal Armoniac*, &c. *Gas Sulphuris* also given alone is a wonderful Medicin in violent Hysterical Fits. And in the beginning of Consumtions, I believe there is not a better Medicin than *Gas Sulphuris* given in large quantities. But the *Cortex*, which is now so universally us'd in Consumtions without the least shew of Reason, I believe to be the most pernicious Medicin in Hectical Distempers that ever was given. I have inquir'd of several Physicians and Apothecaries, whether they ever yet saw a Hectic cur'd by the *Cortex*, who have unanimously declared they never did; and that almost all that have taken it have died. I must declare I never saw any one cur'd of a Consumtion, but by Acids, such as *Gas Sulphuris*, *Ol. Sulphuris per Campan.* &c. by which I

my self have cur'd many. But sometimes in extraordinary Cases, especially if the Distemper has bin of long standing, and the Texture of the Lungs much spoil'd, Acids themselves will leave us in the lurch, even after the Symtoms have seem'd to be much abated, and things have look'd with a promising Aspect: Which I have experienc'd in one or two Patients, whose Lives have bin very dear to me; which I cannot mention without the greatest Concern. Notwithstanding I dare not even in Consumtions leave off the use of Acids, because I am sure they will do more than any thing else; and there are no Medicins whatever that will make people immortal. I have cur'd many with Acids, but never could hear of one cur'd without them.

By the use of proper Acids I have rarely fail'd of curing the following Distempers, som of which are accounted among the most difficult ones; and if ever I can find time, I will give a distinct account of the cure of them.

(1.) *Hard Bellies* in Children, with an Atrophy attending 'em, which is very common, and seldom cur'd by other Methods.

(2.) The *Stone*, to take it off (if of a passable Bigness) with Ease, Speed, and Safety.

(3.) *Childbed Fevers*, of which Dr. *Willis* says, they are most difficult to be cur'd of any.

(4.) *Catarrh*, or Defluxion.

(5.) *Cholera Morbus*.

(6.) *Diarrhea* and *Dysentery*.

(7.) *Jaundice*, &c.

The

The wonderful Succeſs Dr. *Baynard* (with whoſe intimat Converſation I have of late bin honor'd) has had thro the Courſe of his Practice, is eminently known both in *London*, *Bath*, and *Lancaſhire*, where he formerly dwelt: And his Practice has chiefly run upon Acids; which (as he has all the reaſon in the world) he dos ſtrenuouſly vindicate and defend.

It was out of a Life-ſaving Principle that this Gentleman imbrac'd the Doctrin of Acids in oppoſition to the Multitude; who for want of this Knowledg daily record their ſad Cures in Sextons Books, and the Weekly Bills: And I dare ſay, he has wrought more ſubſtantial good Cures, than any one beſides him, who has acted on different Principles.

I don't find that the Method of making the *Gas Sulphuris*, which is a Medicin I have often mention'd, is any where ſet down; I ſhall therfore give an account of its Preparation, which, tho a very eaſy one, is for all that a noble Medicin.

Gas Sulphuris.

Put into a large Glaſs Receiver, that will hold ſix or eight Gallons, about four Quarts of pure Spring-water; then burn in the Receiver a quarter of a pound of pure *Sulphur vivum* made into very long Matches: and when they are lighted, the Flame muſt be as near the middle of the Body of the Receiver as may be. When you have burnt three or four Matches,

the Receiver will be so full of the Steams of Brimstone, that when the lighted Match is put in, it will be immediatly extinguish'd: you must then stop the Mouth of the Receiver very close with a wet Cloth, and let the Steams condense: when you see the Receiver clear, burn more Matches till it is again fill'd up with Steams; then stop it again, and repeat this work till your Matches are all burnt, when your Water will be impregnated with the Volatil Acid Steams of Brimstone.

This Medicin given liberally in malignant Fevers has don Wonders, even where people have bin given over as dead. It is an excellent Medicin taken by way of Prevention in infectious Seasons. And I think this Medicin, if any, deserves to be call'd the true *Prophylacticon.*

Dr. *Baynard* has another way of making the *Gas Sulphuris* somwhat more warm and Alexipharmic.

Take a large Glass Receiver, with a Mouth of three or four Inches Diameter: place it Horizontally, into which pour *Aq. Petasitid. Vlmariæ simp. Vini Rhenani, ana* ℔ *duas*; *Aq. Rutæ, succi Pomorum silvest. vet. ana* ℔ *unam*; *Aq. Theriacalis, Prophylact. Sylvii, ana uncias quatuor: M.* Then take an Iron Ladle fitted to the Mouth of the Glass, with a long Handle; put into the Ladle half an Ounce of *Sulphur vivum* pouder'd, accend with a small *Gad* of red hot Steel; when lighted, clap it into the Receiver so far, that the Fumes may arise in the

the middle of the Glaſs; and the bigger the Glaſs the better: for the more Fumes it contains, the ſooner will your Operation be over. Stop the Mouth with a wet Cloth, that the Steams get not out; when the Fumes have extinguiſh'd the Flame, let it ſtand, that the *Oleum Sulphuris* may trickle down the ſides of the Glaſs, and ſubſide upon the *Menſtruum*; when the Fumes are ſettled, and the Glaſs clear, quickly draw out your Ladle, and repeat the Action till it be well impregnated with ſtrong Volatil *Gas*. Remember always to keep the mouth of the Glaſs well ſtopt with the wet Cloth; otherwiſe the *Gas*, which is of a moſt ſubtil nature, will evaporat.

A Spoonful of this given once in two or three hours in a proper Julap, dos moſt wonderfully extinguiſh Thirſt in Fevers, procures Sweat or Urin infallibly, takes off the drineſs of the Tongue, temperats and cools the over-heated Bile, and procures Reſt. Alſo mix'd with a little Claret, and a Drop or two of Oil of Cinnamon, ſtops Vomiting to a miracle; and is the beſt *Peptic* for a weak and decay'd Stomach.

Note, That when the *Gas* is quite gon, and flown off, the mixture will notwithſtanding remain ſour, as impregnated with the *Oleum Sulphuris*; but the *Gas*, which is the better part, will in time be loſt (it is ſo ſubtil) even almoſt thro the Pores of the Glaſs. You muſt dip the Cork-end of the Bottle in melted Brimſtone, and keep it always immerg'd in cold Water.

Water. But the best way to keep it is in small Glasses, and to open no more at a time than you use, it losing its volatil Parts very much every time the Bottle is open'd.

As a further illustration of the Doctrin of Acids, I shall add an Account I receiv'd from Dr. *Oliver*, one of the Physicians of the Fleet, about the use of *Beveridg*.

'*Beveridg* is a prickt, sour *Spanish* Wine; one 'Hogshead of it mix'd with three Hogsheads 'of Water, makes the Drink the Sailers are 'allowed to drink *ad libitum*.

'By my Experience in the Fleet, those Ships 'Crews who drank this Acid Liquor for their 'common Drink, were much healthier than 'those who by their obstinacy would not be 'brought to it; as for Example:

'The *Royal Oak* a third Rate, carrying a-'bout 500 men, whose Ship's Crew, by Ad-'miral *Nevil*'s particular Order, began first to 'drink Beveridg (he having had experience of 'it two years in the *Mediterranean* in the *Crown*, 'in all which time he lost not above two men) 'and in three months time I don't remember I 'had three Complaints; tho at the same time, 'in other Ships where they drank no Beveridg, 'Fevers and Fluxes were very frequent. Here 'I shall insert one thing worthy of note, That 'the *Royal* Oak wanting Beveridg, and being 'oblig'd to drink Water only, in a few days they 'grew very sickly, and lost above 30 men in a 'month; insomuch that the men themselves

'were

'were so sensible of their own advantage by 'drinking Beveridg, that they heartily desir'd 'they might drink nothing else, and beg'd it 'wherever they could find it. The like expe- 'rience I had of the *Eagle*, *Norfolk*, and se- 'veral other of our Ships, who were always 'better in health when they drank Beveridg, 'than when they drank Water alone, or sound 'Wine and Water. From these Experiences 'I advis'd the Captains of each Ship to procure 'Beveridg as common Drink for the Men, and 'the Success answer'd my Expectation.

This is an exact Relation as I took it from Dr. *Oliver*'s own mouth.

I have more to say, but have already outrun the Bounds of an Appendix; and therfore shall omit what remains till another time.

Advertisment.

WHat Chymical Medicins I prescribe, are faithfully prepar'd by Mr. *Johnson* and *Edwards* in *Fetterlane*, who being men of more than common Integrity, I have thought fit to insert this Advertisment, that people may know where to be well serv'd with Medicins that may answer the Intentions for which I design'd 'em.

John Colbatch.

FINIS.

A

TREATISE

OF THE

GOUT:

WHERIN

Both its CAUSE and CURE are demonstrably shewn.

To which are added,

Som Medicinal Observations concerning the Cure of *Fevers*, &c. by the means of *Acids*.

By JOHN COLBATCH, *a Member of the College of Physicians.*

The Second Edition.

LONDON,
Printed by *J.D.* for *D.Brown*, and *A.Bell.* 1698.

To the Worthy

Dr. *WILLIAM COLE*,

Fellow of the College of Physicians,
LONDON.

Honored Sir,

MY Love to Truth, and the Good and Welfare of Mankind, have ingag'd me in the publishing of the following Piece. I am sure it contains Truth, but the Truths therin contain'd want a much better Champion than my self to assert and defend, against the many and potent Adversaries they are like to encounter. I have therfore presum'd to fix your Name before it, knowing that if you but please to espouse it, my business is don, and the Conquest gain'd; the Reputation you have in the World being sufficient to recommend whatever is

patroniz'd by you. But, *Sir*, the Doctrin herein advanc'd is not new to you, who have long ago practis'd it, even before I knew you; and the wonderful Succeſs you have had in your Practice, is very well known, more eſpecially in *Worceſterſhire*, and the adjacent Counties, among which you long liv'd: and to my certain knowledg, when you were about leaving thoſe parts to com to *London*, the people were as much concern'd, as if they had bin loſing their Common Deliverer, which indeed you were to them. I ſhould be moſt ungrateful if I did not own to the World the Advantage I have receiv'd from your intimat Converſation with me, wherin you have always carried your ſelf more like a Father than a common Friend: and from thoſe grave and ſerious Admonitions receiv'd from you, I have bin ſtimulated to ſtudy Nature to the bottom, that I might arrive at Truth, in which I have bin greatly aſſiſted by you. This Generoſity and Kindneſs I can never forget, as alſo your great Care of me

ſom

ſom Years ago, when my Life was deſpair'd of by all: I am ſure without a Miracle, I could not have eſcap'd the Grave, had it not bin for you; which with all other Kindneſſes I ſhall never ceaſe to acknowledg, and to be

SIR,

Your Faithful and

Obedient Servant,

JOHN COLBATCH.

THE PREFACE.

I *Have long since promis'd a* History of Blood *and the other Juices contain'd in a Human Body, both in their natural and morbid States. This is the second Tract that has slipt out since I made that promise, for which I can make a very good Apology. The* History of Blood, *&c. is a Piece I must fetch out of the Fire, there not being a Page in it that dos not cost me near a Day's Labor and Attendence in my* Laboratory, *to complete; and therfore I can go on but slowly, especially since my Multiplicity of Business requires my being much abroad: Wheras this Tract being compos'd of Observations and Speculations, I have bin able to complete it at those leisure times I have had at Coffee-Houses and other such Places.*

Upon several Reviews I find such a Number of Experiments wanting to make my History of Blood *complete, that my Business will not permit me to finish it in som Years: nay it is so very chargeable a Work, that 'tis more fit to be carried on at the public Expence of the Nation, than by any one privat Hand; and it would be the Honor of the Nation to incourage it. A Thousand Pounds a Year would defray all the Charge of a* Public Labora-

boratory; *and what would such a small Sum be, tho at this time of Necessity, in comparison of the great Advantage the World would receive by it? I am not ignorant how difficult it is to root an Opinion out of mens Minds, when once receiv'd and establish'd, tho on never so false a Bottom; to do which the only Method is by plain and obvious Experiments. If People would lay aside their Prejudice, and set themselves to make Experiments, I am sure they would part with their old Notions, and imbrace my new* Hypothesis.

Truth for a time may be oppress't, but finally suppress't it cannot. Truth is stronger than all Falshood; it is, as one said, Temporis Filia, *the Daughter of Time, and will at length prevail: It is* Simplex & nuda, sed efficax & magna; *simple and naked, but powerful and strong:* Splendet cum obscuratur, vincit cum opprimitur; *It shines when 'tis darken'd, and overcoms when 'tis oppress't.*

I would my self very gladly contribute beyond my Ability towards the setting up of a public Laboratory, by which means I am sure 'tis possible to bring things to a Certainty. What would not People give to save their Lives, and to be freed from Pain? God knows, as the case stands, Physicians can do neither with any sort of Certainty: But by making Multitudes of Experiments, on the Foundation I can easily lay down, the Case may be much alter'd: yet the Burden is too great for any one Man to bear, and were it to be carried on by the Public, it would not be felt.

I have a Multitude of Enemies, who will not ſtick to accuſe and reproach me; and I doubt not but ſom will preſently cry out, That I propoſe a Public Laboratory, hoping to be the Head and Director of it my ſelf, in order to put part of the Allowance into my own Pocket.

To theſe Men I ſhall anſwer in ſhort, that I have no ſuch Aim, but on the contrary would contribute as much as any man of my Fortune towards the carrying of ſo great and uſeful a Work, and would likewiſe ſpend all the Time I can ſpare from my Buſineſs in attending upon it, without expecting the leaſt Reward, except the general one that would accrue to the whole Faculty, in bringing our Profeſſion to ſom ſort of Certainty.

We now grope moſt miſerably in the dark; and it grieves me to the ſoul when I ſee People in diſtreſs, and know not how to help them: If turning over Books would do me any ſervice, I would never ceaſe to do that; but I have too long in vain tried that Method, and till I began to make Experiments, I could act upon no Certainty in any Caſe; and from the Obſervations I have made, I am fully ſatisfied that by numerous Experiments we may arrive at Certainty in the Cure of moſt Diſeaſes.

I have in my Introduction made uſe of a familiar and eaſy Experiment to confirm the Truth of my new Hypotheſis; and if any ſhall take upon them to anſwer what I have ſaid in this, or any of my former Pieces, I expect they ſhould back their Arguments with Experiments, elſe I ſhall take no notice of them.

I have said in my Essay *of* Alkaly *and* Acid, *that at that time I had not had many Patients troubled with the Gout; neither has the Number of them yet bin very much increased: but from those I have had to do with, I am perfectly satisfied, both as to the Cause and Cure of it; and I doubt not but all who will faithfully make use of the Methods I have laid down, will find them to answer their Intentions; for in between forty and fifty Patients, I have not bin above twice or thrice balk'd in my Expectations, and then I had more reason to attribute it to the Irregularities and Perverseness of the Patients, than the Insufficiency of the Method.*

The very Medicins themselves, and the Doses I have prescrib'd, must very frequently be varied according as Peoples Strength and Constitutions vary: and this thing can't be learnt by every new Proselyte in a minute; it is Time and Observation must teach People these things.

The Hypothesis on which I build my Practice, I am sure is true: And if People are once satisfied that the Blood's abounding with Alkalious *Particles is the Cause of the Gout and other Distempers, it necessarily follows that* Acids *are only proper to correct the said Alkalin Particles: But however no Man is obliged to use those Acids only that I prescribe, but is left to his liberty to vary them as he pleases. It would be very arrogant in me, when the* Materia Medica *is of such vast Extent, magisterially to insist upon the Use of any Set of Medicins; I do not in the least pretend to it:*

it: but I assert, that the Cause of the Gout is not from the Blood's abounding with Acid, *but on the contrary with* Alkalious *Particles; and therfore if ever we design to attemt the Cure of the said Distemper with any sort of Certainty, it must be by the means of proper Acids, which I my self have hitherto found effectual, and have not the least reason to doubt that I shall continue so to do.*

As I have before said, so I continue to do, that there is a vast difference in Acids; som (as Dr. Grew *observes) are* Acido-Sulphurea, *others* Sulphureo-Acida, *&c. But this Difference in them, and the different Effects they have upon Human Bodies, are only to be known by Time and Observation.*

It cannot be supposed that a Physician who was yesterday for Alkalies, *can to day so turn his hand, as to use* Acids *in so proper a manner as they ought to be. Almost all the Productions of the Vegetable and Mineral Kingdoms are Acids, but differently specificated; and according to the specific Difference, so they have a different Operation. I have before in one of my former Pieces observ'd that there are manifest Acids and occult ones, and each of these have different Operations according as they are specificated by Nature; som work by Stool, others by Urin; som are* Dieuretics, *others* Diaphoretics; *som are* Emettics, *and others are only* Alteratives, *have no visible, sensible Operation. Now tho a Man may be convinc'd of the Necessity of the Use of Acids in general, yet the great Variety there is in them, and their different*

Opera-

Operations upon Human Bodies, are only to be learnt by Time and Observation.

In all Diseases the Physicians have hitherto unanimously agreed that Acids have abounded; and if the Acid has abounded to such a degree, that with their Alkalies they could not conquer it, why then the Patient has died. Well, but suppose this true; How then coms the dead Body to stink so soon? Every body knows that Acids preserve Animal Substances from stinking and Corruption; and therfore if the Juices of the dead Body were full of Acids, it is difficult to conceive how the Body should so soon begin to putrefy; nay it were altogether impossible it should be so: But Alkalies promoting Putrefaction in Animal Substances, from the sudden Putrefaction of dead Bodies, it is natural to infer, that the Juices were too full of Alkalies, which caused first the Disease, then Death, and afterwards the sudden Putrefaction.

It is still thrown in my dish that I have not bin educated at the University, and therfore how came I to be a Physician?

I am not asham'd to own that I have not had University Education, which I account a Misfortune; but yet I have spent as much Mony to qualify me for the Practice of Physic, as most Men who have spent their Times in the Universities; I have had ocular Demonstration for my Mony, whenas som of our University-Men have had only the fusty Notions of old Aristotle *for theirs. I have aim'd at Certainty in the Cure of Diseases, and if I can but once arrive to that*

(which

(which I will never rest till I have don) I care for no more. If we could have a Public Laboratory at the Nation's Expence, I shall hope to see that Matter sooner effected than it is possible to be at the privat Charge of any one Man. It costs the Nation som Hundred Thousands of Pounds a Year in buying Powder and Ball to destroy Mankind (tho in carrying on the most just War that ever was on foot) and why should there not be one Thousand Pounds a Year laid out in carrying on those Experiments that would tend to the saving Mens Lives? And it would be no disparagement to the greatest Men to be Supervisers in a thing of this consequence, to see the Mony faithfully laid out.

The improving the Doctrin of Specific Remedies is what deserves our utmost Care and Diligence; and if any one should be so kind to me as to communicat any thing of that Nature, it shall faithfully be publish'd, with the Person's Name from whom I had it.

The wonderful and astonishing Succes I have had in the Cure of Fevers of all sorts by the means of Acids, has induced me at the latter end of this Piece to publish som Observations of that nature. And I doubt not but if Acids were once brought in fashion, Fevers would not be accounted such terrible things as they are.

I have not set my Patients Names to my Observations, by reason many of 'em make a Figure in the World, and I fear would not take it well to have their Names appear in print; but if any shall

shall doubt the Truth of any one of the Relations, I will inform them of the Persons Names, and their places of abode, with the Names of the Apothecaries on whose Files they may see the Prescriptions.

I have made som Reflections upon Physicians in general, but those I hint at are principally Foreners, they generally asserting the Doctrin of Alkalies, *tho without the least Reason in the World. I confess there are som* London *Physicians who have bin very violent against me; but from the major part of the* College *I have bin treated with the greatest Candor and Civility imaginable: And I verily believe, generally speaking, there are not so Learned a Body of Men in the World; who instead of opposing and oppressing, would give all the Incouragement imaginable to any who shall make new Discoveries, which have any Tendence to promote the Good and Welfare of Mankind.*

I must confess I have bin the warmer in som Expressions, that therby I might exasperat those who are my professed Enemies to convince me of my Errors, if what I have advanced are such; otherwise to confess themselves mistaken.

In the following Treatise of the Gout, *I have reserv'd but one Secret, and that is a Medicin obtain'd from the* Pyrittis; *yet to all who will but give themselves the trouble of nicely inquiring into the said Stone (which to me seems one of the greatest Mysteries in Nature) the said Secret will easily be discover'd.*

The Alkalieſt, *that universal Dissolvent of* Helmont *and* Paracelsus, *is a thing that has made*

a great Noise in the World; and tho many have bin at vast charge in quest after it, yet I have scarce met with any (except one) in our time, who has bin Master of it. But on som late Experiments made upon the Pyrittis, *I am perfectly satisfied that the said noble* Menstruum *is with little Trouble and Charge to be obtained from this so common, yet most valuable Subject. In convenient season, I will give an account of the Experiments I have made upon it. I have already procur'd a Menstruum from it, that will readily dissolve all the Metals and Minerals I have met with: and the utmost Extent of it I do not yet know, but as soon as I do, the World shall have an account of it.*

I have mentioned this for the sake of som honest Virtuosi, *who will be very glad to be inform'd of the Subject from whence this noble Menstruum may be obtain'd; and if once it coms to be publicly known, it is impossible to imagin what great Service Mankind will receive by it.*

I have, besides my Observations concerning the Cure of Fevers, *&c. added to the End of this Piece three or four Letters; one wherof is a Letter I received from Dr.* Baynard *at the* Bath, *with an Account of a strange and extraordinary Cure wrought by Bathing in cold Water; another is only the Postscript of a Letter from Mr.* Matthews *an Apothecary at* Ledbury *in* Herefordshire, *wherin he gives me an Account of a Specific in the Small Pox, and a very extraordinary Method for the Cure of Convulsions: The third*

is

is a Letter from an unknown Hand, upon which I have made som Animadversions.

When Sir Richard Tabor *first began to use the* Cortex Peruvianus *for the Cure of Agues, every body cried out against it as the most pernicious Medicin in the World: But by degrees they changed their Tone, and it is now becom so extravagantly in vogue, that it is prescribed by som in the Cure of all Diseases, and I believe in a little time will be made use of in Plaisters to cure Corns. By this may be seen the Instability of Human Nature, Men being more governed by Fancy than Reason; that which to day is condemned and exploded, to morrow may be had in the greatest Esteem.*

I am morally certain that my new Doctrin of Acids, *which at present is so much decried, will in a little time obtain the public Vogue, it carrying a Self-evidence and Demonstration along with it: Nay I doubt not but som will be so enamored with it, as to use* Acids *with as much Reason, as others at this time do the* Cortex. *But the Doctrin of* Acids *being of that universal Extent, it is almost impossible that any one can do so much Mischief with them, as is now don by the* Cortex.

Agues *were wont to be accounted* Ludibrium Medicorum, *by reason no Physician could with Certainty cure them; but at last it evidently appearing that the* Cortex *would certainly cure them, a great many people immediatly concluded, that it must answer all that the* Adepts *have said concerning their celebrated* Panacea's, *in curing all Distempers generally accounted incurable; on which*

score,

score, to the no small disgrace of the Practice of Physic, the Cortex *has bin so universally prescrib'd, but with so little Success (unless in Agues) that even the common people begin to cry out against, and be afraid of it.*

Providence has put me on a piece of Work which is the most ungrateful in the World, viz. *To encounter with Prejudices that have bin long rooted in mens Minds; and whoever attemts any such thing, will never fail of being censur'd by many.* 'Tis *a common Miscarriage* (*says* Malbranch) *with all Mankind to be too precipitat in judging; for all Men are obnoxious to Error, and only obnoxious on this Account. But all hasty and rash Judgments are ever consonant to Prejudices; and therfore Authors who oppugn them cannot possibly escape Sentence from all their Judges, who appeal to antient Opinions as the Laws wherby they ought to pronounce. For indeed most Readers are both Judg and Party, in respect to such Authors: their Judges they are, that Quality is inconteſtable; but they are a Party likewise, when disturb'd by Authors in the possession of their antient Prejudices, for which they have the plea of Prescription, and to which they have bin long accustom'd.*

I have heartily indeavor'd to promote the Honor of my Profession, and to inquire after Truth. What I have advanced, I am fully convinced is Truth: But if any one shall by substantial and well grounded Experiments convince me of the contrary, instead of being angry with him, I shall never cease to love and admire him.

The

The INTRODUCTION.

THIS Piece I am ſatisfied will fall into the hands of a great many Ingenious Gentlemen who are not Phyſicians, for whom it will be very natural to ſay, you here pretend to advance a new Hypotheſis in oppoſition to almoſt all Mankind: and tho you refer us to the analyzing of the Blood by the Fire, for a confirmation of the truth of what you ſay; yet that is not ſufficiently ſatisfactory to us, by reaſon we have not an opportunity of making Chymical Experiments, and therfore would be glad of ſom more familiar Demonſtration, wherby we might be ſatisfied without being put to much trouble.

For the ſatisfaction of whom, I ſhall here lay down a Method, and that the very eaſieſt in the World, wherby every man is capable of judging whether my Hypotheſis be true or falſe.

It is well known, even to every Apothecary's Boy, that all *Acids*, ſuch as Oil of *Vitriol*, Oil of *Sulphur per Campanam*, Spirit of *Niter*, Spirit of *Salt*, *Vinegar*, &c. being pour'd upon Syrup of *Violets*, or into a Solution of it, in any aqueous Vehicle, will immediatly turn it from a blue into a very red Color; and as

the Acid is more or leſs ſtrong, ſo will the red Color be of a deeper or paler Dye. On the other hand, all manifeſt Alkalies, ſuch as the Lixivious Salts; all the volatil Spirits and Salts, ſuch as Spirit and Salt of *Hartshorn*, Spirit and Salt of *Sal Armoniac*, Salt of *Vipers*, &c. will turn Syrup of *Violets*, or a Solution of it, either in Spring-Water, or any other aqueous Vehicle, from a blue into a green Color; and as the Alkaly is more or leſs ſtrong, ſo will the green Color be of a paler or deeper Dye.

From the foregoing Experiments it may be naturally infer'd, that if the Serum of the Blood will alter the Color of Syrup of *Violets*, or a Solution of it, from blue to that of Redneſs, it would then be plain that the ſaid Serum did abound with Acid Particles, by reaſon that all Acids, not one excepted, do ſo alter the Color of it. But if, on the other hand, the Serum of the Blood, being mix'd with Syrup of *Violets*, or a Solution of it, inſtead of changing its Color from blue to red, as Acids do, dos, as all other Alkalies, change the blue into a manifeſt green; I think from thence it may reaſonably be infer'd, that it abounds with *Alkalies*: and as it is more or leſs impregnated with Alkalious Particles, ſo the reſult is, either a paler or deeper green.

Now I poſitively aſſert, that I never once could find that the Serum of the Blood, either in this caſe, or any other that I have mention'd,

tion'd, being mix'd with Syrup of *Violets* or a Solution of it, would turn it into any other Color than a green one, as all manifeſt Alkalies, not one excepted, do; but as it has bin more or leſs impregnated with the ſaid Particles, ſo the green Color has bin deeper or paler.

This is ſo familiar and eaſy an Experiment, that every one is capable of making it on all occaſions, Syrup of *Violets* being every where to be had, and there cannot be the leaſt Fallacy or Deceit in it. All manifeſt Alkalies, whether volatil or fixt, do change the Color of Syrup of *Violets*, or a Solution of it, from a blue one to that of Greenneſs; *ergo*, if the Serum of the Blood cauſes the ſame change in the Color of Syrup of *Violets*, it muſt certainly abound with *Alkalious* Particles. All manifeſt *Acids* do change the Color of Syrup of *Violets* from blue to that of Redneſs: But the *Serum* of the *Blood* changes the blue Color into a green one; *ergo* it cannot abound with *Acids*.

This is an eaſy way of arguing, and the plaineſt Demonſtration in the World. There is no one that labors under a Fit of the *Gout*, or any other Diſtemper whether Chronical or Acute, but will be glad to loſe two or three Ounces of *Blood* (tho there be no abſolute neceſſity for *Phlebotomy*) to make this Experiment, upon which ſo much depends.

Every Gentleman is able to reaſon thus with himſelf: My Phyſician tells me that my *Blood* abounds with *Acids* (or at leaſt moſt of the Phyſicians of our Age do ſo) and upon that ſcore gives me *Alkalies* to mortify and correct thoſe *Acids* in my *Blood*. But if my Phyſician ſhould be miſtaken, and inſtead of *Acid* my *Blood* abounds with *Alkalious* Particles; his giving me *Alkalies* muſt increaſe the Matter of my Diſtemper, and inſtead of doing me ſervice, muſt do me the greateſt prejudice imaginable; beſides the great risk I run of loſing my Life, which to every man is the valuableſt thing in the World. Therfore ſince I have ſo fair an Opportunity put into my hands, and by ſo eaſy an Experiment am capable of diſcovering with what Particles my *Blood* abounds, my own Eyes ſhall judg whether *Acids* or *Alkalies* are to be blam'd; whether this Man's Enemies (no leſs than almoſt the whole World, I mean of Phyſicians) or himſelf are to be blam'd. If the Blood abounds with *Acids*, he ought to be kickt out of the Commonwealth, for indeavoring to impoſe upon Mankind: but if on the other hand the Blood abounds with *Alkalious* Particles, he deſerves all the Incouragement in the World for diſcovering to us ſo uſeful and neceſſary a Truth, wherby he expoſes himſelf to the Malice and Rage of ſo many of the reſt of his Profeſſion.

This

This Experiment is liable to no Objection that I know of, and by the means of it (I thank God) I can refer my ſelf to every Gentleman, whether the Hypotheſis I have advanced be true or falſe, and I am ſure from Gentlemen I ſhall have Juſtice. The Phyſicians in general have indeavored to expoſe me, but pray why have they don ſo? becauſe their owning me to be in the right, would be an owning of their own Miſtakes. But by this eaſy Experiment I have appeal'd from them to more juſt and upright Judges, for which they cannot blame me; neither would I have don it, had not ſom of them made it their buſineſs to preach againſt me, even in full and open *Coffee-Houſes:* therfore Juſtice to my ſelf, and Charity to Mankind, have oblig'd me thus to plead for Truth, which is not aſham'd to appear, tho in the moſt naked and open Dreſs.

An Ounce or two of *Blood* is to be ſpared in any Caſe; and pray let but People ſee with what reaſon *Alkalies* have bin hitherto given in *Fevers, Small Pox, Rheumatiſms, Scurvys, Leproſies, Gouts,* &c. It will plainly appear by this Experiment, that the Blood of ſuch Perſons abounds with *Alkalies*; and if ſo, why ſhould we crowd in more Alkalies, unleſs it were to prolong the Diſtemper, to increaſe the number of Fees? People muſt long ſince have known the Truth of this *Hypotheſis,* or they muſt not. If they have not known it, then it's plain they have grop'd in the dark,

and have cur'd Diſeaſes with as much certainty as a blind Man can catch a Hare, as the Proverb is, when we ſpeak of any thing very unlikely. If they have known it before, then the giving of *Alkalies* at the rate that has bin don, is a plain Argument that they have not acted like honeſt Men. But I dare acquit them from this Charge, I do believe they have ſworn *in verbo Magiſtri*. And becauſe a few Book-learn'd Gentlemen have dreamt that the Blood's abounding with *Acids*, has bin the Cauſe of Diſeaſes, therfore right or wrong it muſt be ſo, tho contrary to the moſt obvious and plain Experiments. When I appeal to the analyzing of the Blood by the Fire, my Appeal is to Phyſicians only: and this I have already don, but they have refuſed to do me Juſtice; nay inſtead of doing Juſtice to Truth and me, many of them have abus'd and reproach'd me in all places, ſom calling me Fool, others a mad Man, and all for no other reaſon, than becauſe I have indeavored to advance the Honor and Glory of my Profeſſion, in bringing the Cure of Diſeaſes to ſom ſort of Certainty. Now ſince Juſtice has bin refuſed me by my Brethren, they cannot be angry with me for making my Appeal to thoſe whoſe Intereſt it is to do me Juſtice, and to incourage me in my honeſt Undertakings.

I am heartily ſorry I have bin forc'd to be ſo very warm; but I doubt not that all the honeſt Gentlemen of our Profeſſion will forgive

give me, when they find I drive at nothing save the detecting of Errors, and the advancing of Truth. There is no one can charge me with any thing selfish (unless it be to leave a Name to Posterity) for the publication of this piece, and writing in that warm manner I have don, by reason I have reserv'd no one Secret to my self, but discover'd all I know: and if I can cure the *Gout*, others may do it as well as I; it is but changing sides, using proper *Acids* instead of *Alkalies*, and being at a little trouble in making Observations.

I want som University-Glosses to polish over this whole Treatise; but Truth, like a Diamond, will sparkle and shew it self, tho incompast with Pebles: Nay, Truth needs no fine Glosses to put her off, but always appears best in a naked Dress.

I am sorry I am constrain'd to be the Promulger of this new Doctrin, and am obliged to inculcat it in such Terms as look like Self-commendation. But I have bin too long meal-mouth'd, by which means Truth has suffered Damage: My over-modesty has bin the cause that I have bin so oppress't, nay, indeed almost suppress't from doing any further good in my Generation. But a constant Series of Success has raised me up many Friends to stand by and support me, and I am therby animated to go on in the Work I have so happily begun. Nothing but an extraordinary Providence could have supported me against so many Ene-

mies; as firſt, all the Surgeons in the World, and afterwards the Phyſicians: but from the Phyſicians (eſpecially of this City) I have had by much the faireſt Play, and the moſt civil Treatment; and I muſt do 'em that Juſtice, as to ſay, they are more civil to me every day, for which cauſe I will do all that lies in my power to ſerve 'em. And for the Surgeons, I muſt own I gain Friends among them daily; tho by the means of ſom of them, I and my Family had like to have bin undon, only for indeavoring to do Mankind ſervice.

The following Treatiſe of the *Gout* is built upon my Hypotheſis of *Alkaly* and *Acid*, on which ſcore I thought it neceſſary, by way of Introduction, to publiſh the foregoing eaſy Experiment, that therby the World might be ſatisfied of the Truth or Falſhood of the Hypotheſis.

It is an eaſy matter for any man to mix a little good *Vinegar* or Juice of *Lemons*, with a Solution of Syrup of *Violets*, and to obſerve the Change immediatly made in the Color of it; and at the ſame to mix a little *Serum* of Blood with another Solution of Syrup of *Violets*, and to ſee what a vaſtly different Change that makes in the ſaid Solution. By which means he will clearly diſcern, that the Particles cauſing thoſe different Changes, muſt be vaſtly different. But upon examination of the Change made in the Color of the ſaid Solution by manifeſt Alkalies, it will appear that

* the

the Particles of them, and the Particles with which the *Serum* of the Blood abounds (especially in the forementiond Cases) are exactly the same.

Were there any one manifest *Acid* that would not turn a Solution of Syrup of *Violets* from a *blue* Color to a *red* one, or any manifest *Alkaly* that would not turn the said Solution from *blue* to *green*, I should not insist so much on this Experiment as I have don. But since all manifest *Acids* do produce a Redness, and all manifest *Alkalies* a Greenness, I have all the Reason in the World to believe (had I no other cause) that the *Serum* of the Blood abounds with *Alkalious* Particles by reason it never fails of turning the *blue* Solution into *Greenness*, especially in the Cases before-mentioned.

Object. Supposing your *Hypothesis* true, and that your Predecessors have bin mistaken; how coms it to pass that they could ever cure any Disease?

Answ. I own they have bin able to cure som few Diseases, but how they have don it they themselves could never tell. If it be certain (as there is not the least reason of doubting) that the *Blood* in all or most Diseases abounds with *Alkalious* Particles, and at the same time they accounted for the *Symtoms* of Diseases from the Blood's abounding with *Acids*, how is it possible that the Practice built on so false

a Bottom could ever be certain or successful? But they without being at the trouble of analyzing, or nicely inquiring into the Nature of them, have given *Steel*, *Antimony*, &c. and the several Preparations of them, and by means therof have cur'd several Diseases; but they have given them as Alkalies, when at the same time they will appear to any inquisitive Person to be Acids. They have also given many of the Productions of the *Vegetable* Kingdom, by the means of which many Distempers have bin cured; but upon an exact Scrutiny it will appear that most *Vegetable* Productions are *Acids*. There is scarce one Plant moderatly dried, to free it from the insipid Phlegm with which most Plants abound, that being committed to Distillation *per se* in a proper Vessel, will not afford at least nine parts of *Acid* to one of *Alkaly*; the *volatil* Parts or Salts of Plants being Acids, and the *fix'd* ones Alkalies. Now their giving of these things has stood them in som stead, and cur'd many Distempers by a way of which they were ignorant. The little knowlege we have hitherto had of the true Causes of Diseases was the reason of *Helmont*'s expressing himself after that manner, when he said, *Quisque Artificum facit quod promittit, Statuarius nempe Statuam, Calcearius Calceos indubiè parat, solus autem Medicus nil audet ex arte spondere suâ, quia nititur fundamentis incertis, & non nisi per accidens atque dolosè proficiens.*

That

That there is a Certainty in all Profeſſions but that of Phyſic.

The want of taking pains in making Experiments has bin the only cauſe of building too long the Foundation of our Practice upon ſo falſe a Bottom; and I hope what I have ſaid will excite the Phyſicians of our Age to make ſuch Experiments, that therby we may act upon ſom ſort of Certainty. The Phyſicians of our Time, more particularly of our own Nation, and among them eſpecially thoſe of our *College*, have made more and greater Diſcoveries in *Anatomy* than ever were before, I mean in the Anatomy of the ſolid Parts. But as for the Fluids, thoſe Parts wherin the Cauſe and Seat of moſt Diſeaſes lurk, they have in a great meaſure bin neglected. Yet the *College* abounds with Men of ſuch large Capacities, that if once they ſet about that noble Work, I doubt not but they will ſoon perfect it, to the great Satisfaction and Advantage of Mankind.

As I have before ſaid, ſo I ſhall now repeat it again that I may not be miſunderſtood, that tho I commend *Acids* in the Cure of Diſeaſes, yet I do not pretend that any one *Acid* will anſwer all Intentions, there being a mighty difference in their Operation and Nature. That Acid which will cure an *Acute* Diſtemper, generally ſpeaking, may not cure a *Chronical* one. I have generally obſerved that *volatil* Acids are moſt effectual in *Acute* Diſtempers, and *fix'd* ones in thoſe Diſtempers we call

Chronic.

Chronic. But in these things every Man's Practice must be regulated and govern'd by Observations: For as Physic had its Rise and Original from Observation, so I am sure by that alone it is capable of being brought to perfection.

What has bin said concerning the difference of *Acids*, has only relation to particular Practice; and I have mentioned it upon this account, that after People are fully satisfied that the Cause of Diseases dos not procede from the Blood's abounding with Acid Particles, but on the contrary with Alkalious ones, they should not from thence infer, that any one *Acid* is sufficient to cure all Diseases: For tho it be certain that the Cause of all Diseases procedes from Alkalies, yet there being a vast difference in them, as they differ, so must the Acid, used to mortify and correct the Luxuriant Alkaly, differ. There are volatil and fixt *Alkalies*, as well as there are volatil and fixt *Acids*; or at least they are so, according to the receiv'd Notion we have of *Fixity* and *Volatility*.

I have all this while bin talking as a Physician, but not as a Naturalist; for tho I account for the Cause and Cure of Diseases from *Alkaly* and *Acid*, yet I don't pretend to account for all the *Phenomena* of Nature from those two Principles, tho there have bin those who have undertaken so to do, but I conceive have bin very much mistaken. There are many *Phenomena* in Natural Bodies not to be ac-

accounted for by the mutual Conflict of those two Principles, (if I may so call them) such as *Motion* and *Rest*, *Light* and *Darkness*, *Magnetism*, or the Operation of the *Loadstone*, and a great many others, too many here to insert.

I shall finish this Introduction with an exact Copy of a Letter sent me from my worthy Friend Dr. *Jones*.

Dear Sir,

AS *for* Acids, *Dr.* Baynard *and your self deserve eternal Praise. I ever had a great Kindness for them, and they will readily cure more Distempers than any other sort of Medicins: They are excellent in the* Plague, Spotted Fever, *and* Small Pox; *and in extraordinary pertinacious* Hemoragies, *with a* Febricula, *they are* instar omnium; *and as dangerous as those Distempers are, will hardly fail to cure them if given plentifully. I have had Experience in the three last, from which you may infer their Prevalency in the* Plague; *but I do not speak it merely upon that Inference, but the several credible Accounts I have had of their use to prevent and cure the* Plague. *The second Year of my Practice I cured about thirty of* Autumnal Fevers *by the plentiful use of Oil of* Vitriol. *I find them the adequat Cure in all Cases wherin the Urin is Lixivial, all Putrefactions, all Scurvies wherin the Gums rot, all Cases wherin the Ordure or Urin are of a very ill scent,* Cholera

lera Morbus, *Jaundice, Stoppage of Urin, ſo-poroſe Affections: in theſe laſt Caſes they excede all things, as they alſo do in* Deliquiums; *all dangerous Effects of* Opium, *of which they are the true Correctors,* Opium *relaxing all the Parts, and they contracting them; all irregular Heats of Feet, Hands,* &c. *Vomitings, want of Appetite;* Morphew, *internally and externally uſed; Bitings of venomous Creatures; tough Phlegm; hard Tumors, unleſs ſchirrous; Drunkenneſs; Diſeaſes of the Mouth that have any Stench or Putrefaction; excellent againſt all* Norcottic *Poiſons whatſoever, to ſmell, take inwardly, or dip in them, which is beſt; nay and excedes all things that the World affords if they be very cold;* Syncopes, *too much Sweating, Sunburnt outwardly, Thirſt,* Furor Uterinus, Priapiſmus, *piſſing bloody Urin from Putrefaction, as in the Small Pox, and when you cannot attribute it to any other Cauſe than Putrefaction: Miſcarriages, Itch inward and outward, Ringworm, Tettar: To preſerve from all Putrefaction both in Man and Beaſt:* Fœtor Alarum, Pollutio Nocturna, Gonnorhea ſimplex; Pedor, *or ſtink of the Feet,* &c.

In all theſe Caſes you may very much depend upon them. Make what uſe you pleaſe of this Catalogue, to print, or what you will; it is intended for your Service.

Your affectionat Lover,

J. JONES.

I ſtill keep the Original Letter by me: And the Author of it is a Man of that Truth and Candor, that he would not have wrote me ſuch a Letter, and given me a liberty of publiſhing it, if he had not bin well ſatisfied and aſſured of the Truth of what he has ſaid: Nay, the Clearneſs of his Reaſon is ſuch, that I never knew him mention any thing he was not able fully to demonſtrat.

Of

Of the Gout.

CHAP. I.

THE *Gout* is called *Articularis Morbus*, becauſe it generally affects ſom of the Joints; and according to the Name of the Joints affected, it has a different Denomination: when it affects the Joints of the Hands or Fingers, it is called *Chiragra*; when it affects the Hip, it is called *Scitica*; when it affects the Knees, it is called *Gonogra*; when the Feet, *Podagra*; when the Ancles, *Talia*, or *Talla*, &c.

Tho the *Gout* has ſo many different Names given it, yet I don't at all apprehend but the Diſtemper is exactly the ſame, and that the different Names procede only from the difference of the Part affected.

This Diſtemper is alſo by ſom called *Dominus Morborum & Morbus Dominorum*, by reaſon it is one of the moſt tyrannical Diſtempers, and few but Gentlemen and thoſe of the beſt Rank are troubled with it. It ſomtimes exerciſes it ſelf with ſo much Cruelty and Tyranny, that thoſe who are troubled with it, are almoſt ready to lay violent hands upon themſelves. The

The *Gout* may be divided into two Species, *viz.* that which is *Adventitious*, and that which is *Hereditary:* and of the two that which is hereditary, is by much the most difficult to be cured, and generally rages with the greatest violence.

The Antients did generally reckon that which we call a *Rheumatism* as a species of the Gout, calling it *Arthritis Vaga*, or the *Wandering Gout.* But herein I apprehend they were much mistaken, a Rheumatism being vastly different from the Gout, as will be shewn in its proper place; tho the Method of Cure is much the same.

Great have bin the Disputes about the original Source or Fountain of this Distemper. Som will have the *Brain* to be the principal Part concern'd, and that from it the morbific Matter is translated to the part affected. Others charge the *Liver*, and som the *Stomach*, as *Helmont*, &c. But for my part I charge the whole Mass of the Blood, and all the Juices, and not any particular part; the Reasons wherof will appear hereafter.

The *Gout* is an Index of it self: no one that feels the pain, but is capable of discerning the difference between it and all other Pains; the Pain of the Gout being a deep, distending, piercing, throbbing, continual and bitter Pain.

I apprehend the Parts most immediatly affected to be the Glandules next adjoining to

the *Perioſtium*, which is one of the moſt ſenſible Membranes in a man's Body.

I cannot agree with thoſe Gentlemen who will have all Pain to procede from a Solution of Continuity, which in plain Engliſh is either a Wound or Ulcer: now for my part I can't ſee why we ſhould not be made ſenſible of any thing that injures us, which whatſoever cauſes Pain dos, without deſtroying the integrity of the Parts; and 'tis plain, whatever cauſes a Solution of Unity muſt deſtroy the integrity of them. Father *Malbranch* tells us that our Senſes are given us to guard our ſelves from Injuries, and that they never fail to anſwer the end for which they were given: They are never guilty of deceiving us; as for inſtance, our *Taſte* (a ſtate of Health ſuppos'd) never tells us that *Bitter* is *Sweet*, or *Sweet Bitter*; our *Smells* never fail of diſtinguiſhing agreable from hurtful *Odors*; our *Feeling* never fails of diſtinguiſhing *Heat* from *Cold*, and *Cold* from *Heat*, and ſo on: and all theſe things procede from a placid Vellication of the Membranes. *Pain* procedes from a contraction of the Fibers, and *Pleaſure* from a placid relaxation of them; which being granted, it neceſſarily follows, that a Solution of the Unity of the Parts ſhould rather produce Pleaſure than Pain, by reaſon that when the Fibers are broken, they are not ſo able to contract themſelves as when they are whole.

I don't from this argue that there is no Pain procedes from a Solution of Unity, but that there may be very violent Pains where the Union of the Parts is preſerv'd intire: As for inſtance, a Blow with a blunt thing upon any Part, which only bruiſes it, will occaſion greater Pain than if the ſame Part were cut with a ſharp Inſtrument, tho the one only compreſſes the Parts, and the other divides them aſunder, and ſo makes a perfect Solution of Unity. And I lay it down as a poſitive Aſſertion, that all Pain procedes from a Stagnation of the Juices, which cauſes a Compreſſion of the Membranes; and as the Stagnation and Compreſſion are greater or leſſer, ſo the Pain is: But the ſtagnated Matter, according as it is more or leſs *acrimonious*, ſo it cauſes different ſorts of Pain. *Pain* alſo is different in different parts, according to the difference of the Membranes affected; but there is no Pain in any part without Stagnation.

People have more reaſon to believe there is a Solution of Unity in the Parts affected with the Palſy, where there is a viſible conſumtion and decay, and the Part perfectly waſted; but inſtead of Pain in ſuch parts, they are altogether void of Senſation.

My buſineſs is not now to treat of *Wounds*, and therfore I ſhall not trouble my ſelf to give any account of the Pain which attends them, but only take notice, that it is not from the

division of the Parts, but from the obstruction of the motion of the Juices in the Edges of them, which occasions the Pain that attends them; and when once the swelling and inflammation of the Parts adjacent are taken away, the Pain ceases.

Those who are most subject to this Distemper, are such as live quietly and luxuriously; and for want of proper Exercise, Nature dos not sufficiently discharge the superfluous, excrementitious Juices by the Emunctories design'd for that purpose. It frequently attends those who have bin once poor, and whose Fortune afterwards has bin greatly mended; by which means the manner of their feeding being alter'd, and changing a spare Diet for a more luxurious way of living, they frequently grow fat, and for want of good Digestion and proper Evacuations greatly abound with gross and viscous Humors. Women are not so subject to this Distemper as Men, especially if they have their Courses regularly, by means of which Evacuation they are freed from many Distempers: but the stopping of that Evacuation, or any too great Discharges that way, is the only cause of many Distempers attending that Sex.

The Gout may in general be defin'd to be *a Pain of the Joints and Parts adjacent, occasion'd from an extravasated Alkalin Humor which irritats the Membranes of the Joints, and Parts adjacent.*

To

To prove that the whole Mass of *Blood*, and all the fluid Parts, are originally concern'd in this Distemper, and not any one particular Part, as the *Head*, *Liver*, *Stomach*, &c. the following Arguments will evince.

1. From the general Disorders that precede a Fit.

2. From the Condition of the Blood and Juices during the time of the Fit. Under which Head I shall make it appear that the Blood and Juices during the Fit abound not with *Acid* but *Alkalious* Particles.

(1.) Before people are seized with a Fit of the Gout, they have som general Disorders; and according as their Constitutions are different, so are the Disorders that attend them at this time. But very few (let their Constitutions be what they will) have a Fit of the *Gout*, but they have somthing of a *Fever* before it. Now *Acids* being the only things that hinder *Fermentations*, and prevent *Fevers*, it is impossible they should be in the fault; but *Alkalies* exciting Fermentations, and by consequence causing Fevers, are necessarily here to be blam'd: and were timely care taken to correct the luxuriant alkalious Particles, I am sure it would not be difficult to prevent a Fit; and there is scarce any one that has a Fit of the Gout, but has timely notice to prevent it in case they will take a true Method.

Somtimes the Fits of this Distemper are very regular, returning at certain periods of

time; at other times very uncertain: but that for the most part procedes from an irregular way of living, and the debility of Nature.

Dr. *Sydenham*, that honest and fair Man, to whom all the World is beholden for his ingenious and candid way of writing, in his Tract *de Podagra*, says thus: *Quoties itaque regularis est Podagra, hoc ferè modo Ægrum aggreditur*, &c. As oft as the Gout is regular, it attacks people in this manner; at the latter end of *January*, or the beginning of *February*, it all on a sudden invades them, having no other knowlege of it, but that they find a Crudity and Rawness of their Stomachs for som weeks before, with a windy sort of Distention and heavines of the Body; which Symtoms every day increase, till at last the Tyrant all at once appears: a few days before which there is a sort of *Drowsiness*, and as it were a descent of Winds thro the fleshy parts of the Thighs, with a *spasmodic* Affection: and the day before the Fit, the Appetit is more voracious than at other times, but not natural. All which Symtoms (except the last, and that I have particularly spoken of in the *Appendix* to my Essay of *Alkaly and Acid*) procede from the abundance of Alkalious Particles, as will particularly be made appear.

The Patient gos tolerably well to bed, but about the second hour after midnight is excited with most violent Pain, for the most part affecting the great To, somtimes the Heel, and

at other times the Ankle; presently there follows a Rigor and Horror, and somthing of a Fever. Thus much for the Symtoms preceding a *Regular Fit*; next follow the Symtoms preceding those Fits called *irregular* ones.

Wheras in regular Fits the Feet only are infested, they seeming to be the most genuin Seat for the morbific Matter, as indeed the Word generally used for this Distemper seems to intimat, *Podagra*, being *Pedis Captura*, a Distemper of the Feet; so when it affects any other Part, it is a most certain sign that the Method of the Distemper is inverted, or that the Parts have lost their Vigor: But as it too frequently happens, either from the use of improper Medicins, or som other Irregularities, it changes its Course, and somtimes affects one part, somtimes another, as the *Hands*, *Wrists*, *Knees*, &c. somtimes it affects the Fingers, and by degrees makes them useless; and in som time there are Nodes produced, containing in them a Substance much like *Chalk* or *Crabs Eyes*, which is seldom generated in any other part but the Fingers or Toes, where the Vessels being small, this gross Alkalious Matter is not capable of being absorbed by the small *Capillary* Vessels, and so by long lying is converted into the foresaid Substance: which being nothing but the morbific Matter indurated, is a clear Demonstration of the *Hypothesis* I have advanced, and am indeavoring to confirm. The indurated

morbific Matter being a plain known *Alkaly*, it is impossible the Distemper can procede from *Acids*: Somtimes the morbific Matter being lodg'd upon the Wrist, causes large white Swellings, I have seen them as big as a large Egg: [and somtimes upon the Joints of the *Fingers*, I having seen all the Joints of both Hands in som persons swel'd to such a degree, that it is almost incredible; and of all Swellings, these white ones are the most difficult to be brought down.] When it affects the *Thighs* (which is very seldom) it causes a sense as if a great Weight were hang'd upon the part; but the Vessels being great, the Obstruction is not so, and so dos not excite very great pain in that part. But when it affects the *Knees*, it causes the most exquisit Torments, and fixes the Patient to the place where he lies as if he were fastned with a Nail, he not being able to move himself at all: yet the Pain is not altogether so urgent during the whole Fit, so the Patient keeps but the Part affected quiet. [When it affects the *Shoulder* also, it puts the Patient into most miserable Pain, and frequently lasts longer than in any other part besides, unless it be the *Heel*, from which part I have somtimes met with a great deal of difficulty in removing it.]

The *Regular Gout* (if so Tyrannical a Distemper can at all deserve that Name) seldom invades people but about the latter end of Winter; and after it has play'd its pranks for two

or

or three months at furtheſt, it civilly gos off, and leaves the Patient in a good ſtate of Health: But after it becoms irregular, ſom people are never free the whole Year, unleſs in the two or three very hot months, and have frequently the moſt ſharp and violent Pains for fourteen days or more together, without the leaſt remiſſion, attended with Sickneſs, and very frequently an almoſt total loſs of Appetit; which cannot procede from an abundance of Acids, for that excites Appetit, and helps Digeſtion. At thoſe Intervals when the Diſtemper is abated and off, they have generally a great ſtiffneſs and diſorder in thoſe Joints that have bin affected, I mean in *antiquated, irregular* Gouts; for after the Fit of a *regular* Gout, there is no ſuch thing. This is to be obſerv'd that the more years people have labored under this Diſtemper, the leſs violent is their Pain; but then they are generally attended with a greater Sickneſs and Diſorder in their Stomachs: nay, ſomtimes the morbific matter is wholly thrown into the Stomach and Guts, which are membranous parts; and when it is ſo, it ſeldom fails of proving fatal, [unleſs the Symtoms are ſuddenly taken off by proper Remedies.] If it be any ſatisfaction to men in miſery to be accounted among the Number of thoſe who are men of Senſe, all people who are afflicted with the *Gout* may claim that Privilege: For, as to my own part, I never yet met with one Blockhead or Fool

ever

ever troubled with it, which is taken notice of by almost all that have written upon this Subject.

The Blood's abounding with too great a quantity of Alkalious Particles, is the general Cause of this Distemper, in order to which there are several other things that concur: As,

First; Too moist a state of Air, which hinders free Transpiration, and wherby the Excrementitious Alkalin Particles, which should be thrown out by the *cutaneous* Pores, are retained; and the quantity of Excrementitious Alkaly, which is thrown out that way, those Passages being free, is not inconsiderable; which Particles being retained in the Blood, do greatly contribute to the raising of this unruly Devil, which the wisest Magicians hitherto have not bin able to lay, and which has bin the occasion of this Saying,

Solvere nodosam nescit Medicina Podagram.

And this is one of those Devils which is not to be cast out but by Prayer and Fasting; that is, Nature without help, is not able to get the mastery of it, or to rid her self from it. But alas, for want of a true knowlege of the general Cause of this Distemper, Nature has hitherto rather bin oppress than assisted; this *Hydra* not being to be overcom but by pouring in fresh Battalions arm'd with pointed Spears

Spears and Lances upon him, *viz.* by giving large quantities of Medicins, whose Particles are pointed, and therby made capable of dividing the gross obstructing Matter, and turning it into a state of Fluidity.

Secondly; The use of many sorts of Meat, and too great Ingurgitation therof; for by that means the Stomach is oppress't, and Digestion hindred; by which means the whole Oeconomy of the Body is put out of order, and a Foundation laid for more Distempers than that of the *Gout* only; the Stomach being to the Body as the Root to the Tree, or a Spring-head to a River: for if the Spring or Fountain-head be muddy, or troubled, the Streams that come from it must be so also; if the Root of the Tree be vitiated, the Branches cannot be supplied as they ought. Good Digestion makes good Chyle, and good Chyle makes good Blood; but if the Chyle be vitiated by ill Digestion, the Blood made by it must be vitiated also, and consequently must be the cause of bringing those Distempers upon people to which they are subject. For as my Predecessors have accounted for the general Cause of all Diseases from too geeat an *Acidity* of the Blood and Juices, and according to the difference in the Body and Part affected, the Distemper has differ'd; so I, who account for the general Cause of all Diseases from the abundance of *Alkalious* Particles, don't think I do amiss in following the Foot-

steps

steps of my great Predecessors in this, that the same Alkaly, which thrown upon the Joints causes the *Gout*, being thrown upon the Lungs may cause a *Phtisis* or *Consumtion*; and upon the Membranes of the Brain, may cause a Stagnation and Extravasation of the Blood, and occasion an Apoplexy, *&c.*

Thirdly; The often use of strong Wines, especially fasting, by which means the Blood and Juices being impregnated with the Spirits of the said Wine, these Spirits meeting with the volatil Alkalious Salt of the Blood, by a mutual conjunction or combination of them, are turn'd into that Substance (or somwhat like it) which *Helmont* calls his *Offa Alba*; which coagulated Substance not being capable of moving with the Blood and Juices thro the small Vessels, causes Obstructions: and that the Gout procedes from obstructing, corrosive Particles, I believe no one doubts. Likewise the said vinous Spirits acting upon the Nerves, do cause them to lose their Tensity, I mean when the said Liquors are drunk in too large quantities, and often repeated: for a small quantity of Wine drank at convenient Seasons dos raise the Spirits, and invigorate the Nerves; but a Bow overbent becoms good for nothing: and any thing else that is of a springy nature being overprest, makes them lose their Springiness altogether; so the Nerves being over excited by large quantities of Wine, at last lose their Tone, and instead

of

of extended Cords they becom lax, and by that means are made uncapable of exciting or actuating the Membranes, the ſenſible Parts, which are made up of nothing elſe but nervous *Fibrillæ*; ſo that groſs Particles being thrown upon them, they are made uncapable of freeing themſelves from the ſaid Particles, and all becauſe they have loſt their wonted Vigor. The whole *Oeconomia Animalis* is perform'd by Relaxation and Contraction, as will be ſhewn more at large in its proper place; and when the Parts, *viz.* the nervous Fibers, have loſt their Tone, they are not able to disburden themſelves of the excrementitious or morbific Particles caſt upon them: wheras when they are in a due ſtate of Tenſion, if any heterogeneous Particles are caſt upon them, they readily throw them off; and there is nothing ſo much deſtroys the Tenſity of the Nerves as hard Drinking: wherfore it was well ſaid by a certain Poet,

Una Salus ſanis, nullam potare Salutem.

He that in Health would long remain,
From drinking Healths he muſt refrain.

Fourthly; The immoderat uſe of Venereal Exerciſes, which ſpends the Spirits, and decays natural Heat, and ſo procures a Weakneſs to all the parts of the Body. Every man experiences, that by a few Venereal Imbraces his Spirits

Spirits becom more languid, and his Body more weakned, than by the loss of a large quantity of Blood. It has bin observ'd, and is what I believe generally holds true, that few or none are ever troubled with the Gout before Marriage, or the use of Venery; and yet the *Roman* Priests of all sorts both Regular and Secular, who profess Chastity and abjure Matrimony, are as frequently troubled with this Distemper as any people in the world. It is a vain thing to suppose, as som have don, that the Reason why Children have not the Gout as well as grown People, is, because the Juices of their Bodies are not so very acrid, whenas we frequently see them as much or more subject to *scrophulous* Tumors, *&c.* than grown Persons are, which procedes from nothing else but an extraordinary Acrimony of the Juices. There is nothing puts the Spirits into that violent Motion, and exagitats them so much as Venereal Exercises; and whatever violently exagitats the Spirits, must weaken the Nerves, and make them unfit to perform their Offices, which is to contract the Parts, and inable them to throw off whatever is noxious or hurtful to them: wheras, when they have lost their Tone, they are unfit for that Office. There is a twofold Motion in mens Bodies, *viz.* a voluntary and involuntary one; the voluntary one is when we move all or any particular part at our own pleasure: and there is no one that I know denies but all

Animal

Animal Motion is perform'd by the mediation of the Nerves. Involuntary Motion is that which is perform'd whether we will or not, being executed as well when we are sleeping as waking; such is the Motion of the Lungs, Heart, Arteries, *&c.* Now one great End of involuntary Motion is, that the Parts being contracted or squeez'd together, they may throw off all noxious, excrementitious Particles by Pores prepar'd for that purpose, which cannot be rightly don when the Parts have lost their Springiness and Tone.

Fifthly; Overmuch Sleep, especially in the Afternoon, and that immediatly after Dinner. It is generally allow'd and made appear by several Great Men, but more particularly by my worthy Friend Dr. *Cole*, that there is a universal Relaxation of the Nerves and nervous Fibers during the time of Sleep, but more especially of those Parts not made use of for involuntary Motion; and the Parts used for involuntary Motion have not that occasion for it as the other Parts have, they wanting but a small supply of nutritious Particles in comparison of the others. Now during the time of the relaxation of the Parts they receive the Matter for their Nutrition into them, as that excellent Person well observes; but the said Matter cannot be applied to them till Sleep is over, and the Parts com to a state of Contraction; by means of which Contraction, so much as is necessary is applied to them, what is superfluous is taken

taken or prest into the receptory Glands, and carried again into the Blood-vessels by the *Lymphæducts*, and the excrementitious Parts discharged by the excretory Glands. Thus it is in a state of Health, and that it should be so is absolutely necessary; for while we are awake there are vast wastes and loss of Substance, as I have observ'd *Nov. Lum. Chyr.* pag. . and that this waste should be supplied is not only convenient, but absolutely necessary, which cannot be more commodiously don than while we are asleep: the Nerves and nervous Fibers being lax, the Parts are more capable of admitting the nutritious Particles into them than at any other time. That there is a universal Relaxation of all the Parts during the time we sleep, is past dispute; and that it should be so is absolutely necessary: for all the Nerves and nervous Fibers while we are awake (a state of Health being supposed) are kept in a full Extension, like a bent Bow, or extended Fiddlestrings, which, if their Extension be overlong continued, do therby becom useless: therfore to preserve and keep them fit for use, it is found necessary to ease them of their Tension somtimes, that therby they may be serviceable upon occasion. Thus it is with the Nerves, which being always extended when we are awake, it is necessary they should be relax'd during the time of Sleep, that therby being supplied with fresh Spirits, they may be fitted for the Morrow's Action.

But

But as Sleep moderatly uſed affords this great Convenience, ſo by peoples overmuch indulging themſelves in it, it proves very detrimental: by continuing the Nerves and Fibers too long in a ſtate of Laxity, they receive too great a quantity of Humidity into them, and therby becom unfit for Action, not being able to throw off the excrementitious Juices, nor apply the nutritious ones as they ought to be; which is the reaſon that thoſe who ſleep much, eſpecially after Dinner, are generally groſs and unweildy, the Fibers being clog'd, and ſo uncapable of rightly diſpoſing the Juices that are lodg'd upon or in them, or performing any other animal Offices as they ought. It is commonly ſeen that thoſe who much indulge themſelves in ſleeping, are full of Juices, and generally lazy; wheras ſuch as content themſelves with a moderat quantity of Sleep are vegete and ſpritely, and fit for all manner of Undertakings. Tho I allow Nutrition to be perform'd while we are aſleep, yet I believe the quite contrary as to Digeſtion of ſolid Food in the Stomach, that not being to be don but when the Fibers of the Stomach are ſo vigorous and tite, as to be able to ſqueeze out the Chyle into the ſmall Guts as faſt as it is made; none of the Juices of our Bodies being any other way made than by Comminution and Compreſſion; or Mixture, of which Office the Stomach is altogether uncapable when we are aſleep: And all People (very few except-

ed) who eat Suppers late at night, find a Load of undigested Matter upon their Stomach next morning; and, as I said before, Digestion being hindred, the Chyle must be depraved, and by consequence all the other Juices. As eating late Suppers is very pernicious, of consequence sleeping after Dinner must have the same effect, it being only from peoples going to bed, and sleeping after supper, which makes that hurtful: for would they use as much Exercise, and continue as long from Sleep after Supper as Dinner, they would be both of equal advantage; but since Man can't live without sleeping, and Night being the most proper time for it, all things being quiet and still at that time, it is necessary that People should eat their full Meals at such times as the Stomach is most capable of digesting them. And we generally find that those who most indulge themselves with Sleep, especially after Meat, tho they have gross corpulent Bodies, yet they are generally subject to Diseases, and are seldom long-liv'd, which argues that Digestion is not well perform'd.

Sixthly; Overmuch Watching, and Fasting, and Study, Sorrow and Care, and much Labor, because they spend the Body, and cause a weakness in the Parts therof, may occasion the Gout. It is a common Maxim, that *Omne Nimium vertitur in Vitium*; so the Nerves and nervous Fibers being kept in a state of Laxity too long, by being overcharg'd with slimy moist

moiſt Particles, are hardly to be brought to a due ſtate of tenſity again: and being too long kept in a ſtate of Extenſion, by that means loſe their Tone, which is not again to be reſtor'd but with the greateſt difficulty imaginable. A Bow being kept long bent, or Fiddleſtrings left extended for any long time, do both of them becom uſeleſs: So it is with the Nerves and the Offsprings of them; the Fibers, which are the only Inſtruments of animal Motion, whether natural or voluntary, when kept too long extended, the Spirits being exhauſted by that means, becom flaccid, and ſo uncapable of throwing off the excrementitious Alkalious Particles, (all the Excrements of Man's Body being *Alkalious*) wherby Obſtructions are cauſed, and by that means Pain either greater or leſs according as the Obſtruction is, or the Particles more or leſs acrid.

Seventhly; Overmuch Reſt and Eaſe do greatly contribute to the producing of this Diſtemper, by reaſon that for want of due Exerciſe many Superfluities are retain'd in the Body, which by moderat Exerciſe would be diſcharg'd. Moderat Exerciſe puts the Blood and Juices into a brisk and nimble Motion, by which means Tranſpiration is greatly promoted; and Tranſpiration being one of the greateſt and moſt advantageous Evacuations, that being hindred, or not ſufficiently promoted, muſt be of univerſal diſadvantage to the whole Body.

Eighthly; Sudden Rest, and exposing the Body to the Air in cold or moist Seasons after any violent Exercise, is as great a Cause of this Distemper, and many others, as any one thing besides. All sorts of Exercise, as before observ'd, do set the Blood and Juices into brisk Motion; which Motion being suddenly check'd, and Transpiration hindred on a sudden, the excrementitious Particles, which would otherwise have bin carried off that way, are thrown upon som of the Parts, which by causing Obstructions, and vellicating the Membranes, promote pain in the highest degree.

Ninthly; The total leaving off any accustom'd Exercise is very pernicious, for the Reasons before-mentioned.

Tenthly; From the keeping of the Feet either too hot or too cold. The Gout is, by way of eminency, generally called *Podagra, quia Pedum usum impediat*, because it takes away the use of the *Feet*, which are more generally affected than any other Part. Now Cold keeps the Nerves in a state of Contraction or Extension, and Heat relaxes them; and being either contracted or relaxed too long, for the Reasons before-mentioned, they lose their Springiness, and therby are not capable of throwing off the excrementitious Alkalin Particles, of which all the Parts are full: and the Nerves of the Feet being disorder'd, having lost their Tone, a greater Flux of Humors is thrown upon them than any other Part,

which

which makes the Gout there more tormenting and troublesom than in any other Part. It is that Flux of Humors to the lower Parts, which makes the healing of either Wounds or Ulcers in the Legs or Feet much more troublesom and difficult, than in any of the superior Parts. So it is in the Gout, when the *Feet* or *Ancles*, but especially the *Heels*, are affected, a Fit is much more difficult to be taken off, than from any other Part. So likewise when the Tone of that Part is any way injur'd, it much sooner receives morbific Impressions than any Part besides.

Eleventhly; From the stopping of any usual Evacuation, as the monthly Courses in Women, and a Flux of the Hemorrhoids in Men, which I have frequently known to keep their certain Periods to a day; by means of which Obstruction the excrementitious Matter wanting its usual Vent, is transmitted to som other part of the Body. And according to the nature of the Part on which it is thrown, it exercises its Tyranny. If there be a Laxity in any of the Joints, it is thrown there, and so causes the Gout, and other different Diseases according to the Nature of the Part on which it coms.

Having somwhat distinctly given an account of all those things which either cause the Gout at the beginning, or accelerat a Fit in those who have already received the morbific Impression, and also of the general Dis-

orders that precede a Fit, I shall now com to my Second Head, which is,

Secondly, That the Blood and Juices during the time of the Fit abound not with *Acid* Particles, but on the contrary with *Alkalious* ones.

I hate Tautologies, and therfore shall not here trouble you with any Experiments made upon Gouty Peoples Blood, but refer you to my *History of Human Blood*, [a small Specimen of which you have in my first Answer to Dr. *Tuthil*] where you will find several Experiments ranged in such Order, and References made to the Substances obtained from the Blood of People in a state of Health, with the great disproportion between the quantity of Alkaly obtain'd from the one and the other, that it will raise your Admiration to see how we have grop'd in the dark for want of making Experiments. I have often found the quantity of Alkaly obtained from the Blood of People laboring under a Fit of the Gout, to excede that obtainable from People in a state of Health, frequently as six to four, or therabouts, somtimes as five and a half to four, at other times as five to four; the Quantity of *Alkaly*, in which the Blood of those laboring under a Fit of the Gout, excedes that of healthy People, differing as the Fit is more or less violent.

Besides the necessary Conclusions to be made from reiterated Experiments, of which, as I said

ſaid before, you will find many ranged in their proper places, which Experiments themſelves are as clear a demonſtration of the Truth of my Hypotheſis, as is given by the greateſt Mathematicians to prove any of their Propoſitions; and indeed we have no other way of arriving at Truth than by making Experiments; for a man ought not to draw a Concluſion from any one Experiment, but where Multitudes do exactly agree with little or no variation, one may without preſumtion draw a Concluſion from 'em, tho it may thwart the commonly received Opinions: I ſay, beſides the neceſſary Concluſions to be made from reiterated Experiments, of diſtilling or analizing by Fire the Blood of ſuch as labor under a Fit of the Gout, from the generating of the *chalky* Subſtance contained in the *Nodes* during that time, which Nodes and chalky Subſtance are at no other time produced than in the very time of a Fit; it plainly appears that the Blood and Juices do more abound with Alkalious Subſtances than at other times; that is, the Blood and Juices of one laboring under a Fit of the Gout do more abound with Alkalious Particles, than the Blood of the ſame or any other perſon who is in a ſtate of Health. What is this *cretaceous* Body but a collection of *homogene* Particles, Particles of one determinat Figure? I ſay, a collection of Particles of one determinat Figure, by reaſon the Fire will not totally deſtroy its Texture, which

were it a Body composed of Particles of different sizes and figures (which are what we Chymists call *heterogene* ones) the Fire would destroy it; and that these Particles are what we call *Alkalin* ones, I suppose no one will dispute, seeing they answer all the *Phænomena* that the most known Alkalies will do, *viz.* to cause an Ebullition or Effervescence with all the acid Spirits, such as Spirit of *Niter*, *Sea-Salt*, *Vitriol*, *Vinegar*, &c. and when calcin'd will turn Syrup of Violets green, and somtimes (tho not always) do the same without Calcination. Now the Blood and Juices during the time of a Fit being too turgid with Alkalious Particles, and the Emunctories by which they should be discharged being som way or other obstructed, or made uncapable of throwing off these excrementitious Alkalious Particles, by that means they are thrown upon that Part which is most disposed to receive them, and affect the Part with the most raging, intolerable sort of Pain: and in time there is a coalition of the said morbific, excrementitious Particles into the said cretaceous Substance; and it is very plain, the said Substance is nothing else but the morbific Matter indurated.

That the whole Mass of Blood, and the rest of the Juices do abound with too great a quantity of Alkaly during the Fit, and before the Fit coms on, not only the Generation or Coalition of this chalky, alkalious Substance, but the Quantity that is generated is sufficient to evince.

vince. I have known almoſt two Drams taken from the middle Joint of the great To, which was all generated in that place, at leaſt during the time of a Fit, which was not a very long one; and that it was generated during that time is plain, the Part not being in the leaſt ſwelled before the Fit's Invaſion: and that this Subſtance, or the Particles of which it is compoſed, are ſeparated from the whole Maſs of Fluids, is paſt contradiction. According to the moſt nice Obſervation I could ever make, this Subſtance is lodged in the Glands immediatly adjoining to that Membrane which covers the Bones at the place of their joining together. Now if the whole fluid Matter contain'd in thoſe Glands were converted into that chalky Subſtance, the quantity could not be ſo great as what is frequently found upon ſom of the ſmall Joints, *viz.* on the Fingers and Toes: Therfore it muſt procede from theſe Parts being overmuch relaxed, by which means this great quantity of Alkaly is ſeparated from the whole Maſs, and caſt upon them. That it cannot procede from the Coagulation of the Juices in the Part only, is very plain, the Juices of the Part being heterogene Subſtances, or Subſtances compoſed of Particles of differing ſizes and figures; and whatever Subſtance is compoſed of ſuch different Particles, can never produce ſo ſimple a Body as this chalky Subſtance is: Wherfore this Body can be nothing elſe than a Coalition of ſimple

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Alkalin Particles separated from the Blood, and lodg'd upon the weaken'd, relax'd Part; and from the Laxity of the Part it is that so great a quantity of these Particles is heap'd together, and so causes the Nodes. And as the Relaxation is greater or less, so the Nodes are, the Part being capable of distending more or less, and receiving a greater or less quantity of the said Particles, according to the greatness of the Relaxation.

Tho I argue from the generation of these Nodes during a Fit of the Gout, and the existence of them afterwards, that the Blood at that time is more turgid with Alkalious Particles than at other times; yet I would not have people imagin that I know so little of the Gout, as to say that no Part is affected with it, where during the Fit these chalky Nodes are not generated: For should I do so, I should betray my self to be altogether ignorant of the Distemper of which I have bin so long treating. I do allow there are a great many people that have long and tedious Fits of this Distemper, who have never any of these Nodes; nay very frequently the Fits are more violent: For, *Salia non agunt nisi soluta*; Salts don't act, at least not in such a degree, unless they are dissolved. And the Salts or Alkalin Bodies of which these Nodes are composed, being precipitated upon the Part in a dry form, do not cause so great a Vellication as if they were dissolv'd in a slimy viscous Substance: for tho the

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Stagnation is greater, yet the Vellication is not ſo great, and by conſequence the Pain not ſo violent; nay, when there are Nodes generated, the Fit uſually terminats in that Part; but in thoſe Fits where there is no Node generated, one Part is tyrannically handled for a conſiderable time, and then the morbific Matter is tranſlated from that Part to another: and ſo ſom are tormented for whole weeks and months together, eſpecially if there be a general Debility and Weakneſs of all the Parts: tho frequently the morbific Matter is diſcharged, and the Diſtemper gos off after it has crucified one Part only, eſpecially for the firſt five or ſix Fits; yet afterwards it is not ſo civil, but when one To, or ſom one Joint of either Hand or Foot has bin tormented for many days together, after a ſmall remiſſion, it will fetch a skip to ſom other Part on the contrary ſide. After this manner are poor Mortals handled, eſpecially thoſe who abound with the good things of this World, which occaſion'd one to ſay, *Si Salutem cupis, aut Pauper ſis oportet, aut ut Pauper vivas:* If thou deſireſt Health, be a poor Man, or live as a poor Man; for ſweet Meat muſt have ſour Sauce. The antient *Romans* to prove this, invented this Fiction: They feign'd two Goddeſſes, the one called *Volupia* the Goddeſs of Pleaſure, the other called *Angeronia*, the Goddeſs of Anguiſh and Pain, Names fitted to their Natures; and the Prieſts of *Angeronia* did ſerve at the Altar

Altar of *Volupia*, to signify that in this Life Pleasure and Sorrow are mix'd together; and the Image of *Angeronia* (Anguish and Pain) was always set upon the Altar of *Volupia* (Pleasure) to teach that Sorrow is a Companion of Pleasure, and Pleasure of Sorrow.

I have said before that Pain procedes from a contraction, and Pleasure from a relaxation of the Nerves and nervous *Fibrillæ*. Now I confess it seems contradictory that I should lay it down as an almost indisputable Truth, that the Parts being relax'd are the original cause of this Distemper, and that being kept in a state of Contraction they should hinder the first invasion of it, or its returns afterwards; when at the same time I allow that the violent Pains attending people during a Fit procede from great Contractions; and according as the Contractions are greater or less, so are the Pains, the Contraction being caused from acrid, corrosive, alkalious Particles; and as those Particles abound in quantity or quality, so are both Contractions and Pains greater or less. There is a distinction to be made between natural and preternatural Contractions and Relaxations: the Parts being naturally and regularly contracted, do enable Nature to perform all its Operations aright, and so by moderat relaxation do create Pleasure; but any of the Parts being overmuch or overlong relax'd, by that means cause a Load of excrementitious, alkalious Particles (And as I have many

many times obſerv'd, ſo I ſtill continue to aſſert, that the Excrements of our Bodies are all Alkalious, ſuch as *Sweat*, or what is diſcharg'd by inſenſible Tranſpiration, *Tears*, *Earwax*, *Urin*, *Bile*, &c. But what is voided by Stool is not properly to be called the Excrement of our Bodies, that being rather the Excrement of our Food, and for the moſt part nothing but the groſs parts of what we eat, which are unfit for Nutrition, tho frequently upon ſom Indiſpoſitions of the Guts, and taking Purges, there are great diſcharges from the Blood and Juices that way: But what that Subſtance is, or of what particles it is compoſed, my ſqueamiſh Temper would never yet give me leave to try) which being lodg'd upon any part, and overmuch relax'd (unleſs the parts are ſo much relax'd as to cauſe the Palſy, and therby have loſt all manner of Senſation) do by vellicating and eroding the ſenſible *Fibrillæ*, put them into violent, dolorous Contractions, which continue till the vellicating Particles are ſom way diſcharged, or elſe by the interpoſition of ſom terreſtrious Subſtance their Angles are filled up, and ſo made uncapable of vellicating the Parts: of this kind is that cretaceous Body contain'd in the Nodes, there being generally no longer any pain after the cretaceous Subſtance is perfectly form'd.

While in theſe frail Bodies we are always ſubject to change, the greateſt Pleaſure bringing us to the very brink of pain and miſery, and

is what generally succedes it; and by enduring Pain, we know the better how to set a value upon that which is truly and substantially pleasant.

Sleep, which is none of the least of our Pleasures, is but an *Umbra* of Death; and tho during the time of it, when the parts are relax'd, the Matter for Nutrition is cast upon them, yet not without a mixture of excrementitious particles; which, when we awake, if the parts are not able so to contract themselves as to throw off the excrementitious particles, as well as apply the nutritious ones, a Distemper must follow.

I being in company with a Stationer in *Fleetstreet* not long since, he complain'd that he was seldom free from the Gout in his Feet; and if at any time he applied Colwort Leaves (as he frequently did) to the bottoms of them, within a few hours after he could scrape from each of them near a spoonful of fine Pouder of Chalk, and from the discharge of this Alkalious Substance he found great relief. Pray from whence could this chalky Alkalious Substance com, or what should it be but the Matter of his Distemper, the discharge of which was a great Relief to him? Now had his Distemper proceded from Acids, the bringing away of the said chalky Alkalious Substance must, instead of being serviceable to him, have bin a great detriment and disadvantage, by reason it would have mortified

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the Matter of his Distemper: But the great quantity of Alkaly discharged is a plain Argument that there was no Acid to mortify, but that this very Alkaly it self was the Matter of the Distemper, and therfore the discharge of it proved beneficial.

A great many Instances of this nature I have met with, as I question not all other Physicians, who have bin any way conversant with such as are subject to this Distemper, have don: And if we would give our selves the liberty of thinking, and making due Reflections, we cannot but attribute the Cause of this Distemper to an abundance of Alkalies in the Blood and Juices, or at least in the parts affected.

CHAP. II.

HAving, I hope, given a somwhat clear Account of the Cause of this Distemper, I shall now procede to the Cure of it; in which I doubt not to acquit my self better than my Predeceſſors have don, the Foundations upon which they built being sandy, and so not like to last long, but liable to be overthrown by every Blast. Now my Foundation being substantial and firm, I doubt not the Superstructure will be so likewise, the Experiments on which I have built my Hypothe-

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sis being so clear and demonstrable, that I defy the World to contradict them.

I shall, *first*, begin with the *Dietetic* Cure.

Secondly, Shall endeavor to demonstrat the Insufficiency of the Method of Cure both heretofore, and at this time commonly practised by the generality of Physicians in using *Alkalious* Medicins and *Opium*.

Thirdly, I shall give an Account of the Method of Cure by the means of Acids, wherin I doubt not, to all unprejudiced persons, to make it appear that this Distemper deserves not to be rang'd among the number of incurable ones: And then conclude all with two or three very remarkable Cases.

First, for the *Dietetic* Cure, which consists in the due regulation of the six things called *Non Naturales*, which are; First, *Air*: Secondly, *Meat and Drink*: Thirdly, *Motion and Rest*: Fourthly, *Sleep and Watchfulness*: Fifthly, *A due excretion of the Excrements*, and *retention of the good and useful Juices*: Sixthly, *A due regulation of the Passions*.

Without a due observation and regulation of the forementioned six things, all the Medicins in the World can avail but little, tho the Advantage that accrues from the use of 'em, is more in preventing the return of the Distemper than in taking off the Symtoms when people have a Fit upon them.

First

First of all *Air*, without which we can scarce live a minute; and as Air in general dos contribute and is absolutely necessary for our living at all, so good Air greatly contributes to our living well and in Health. It is said by som body, that *plus Aere quam Cibo vivimus*, we live more by Air than Meat: and that Air dos assist in the nutrition of Animal Bodies, the famous Instance of *Vipers* so well known, is sufficient to evince; for let a young Viper be put into a Glass-Receiver, and the Receiver be cover'd over with a Bladder that has holes prick'd in it, and the Viper will becom as large and fat as if he were in the open Fields. I have not made this Experiment my self, but have received it from Persons of that Worth and Honor who have don it, that I as much believe the Truth of it as if I had made the Experiment. If the Air in which we live and breathe has any communication with the Juices of our Bodies (which I believe no one doubts) then good Air must of consequence greatly contribute towards preserving the Texture of the Blood and Juices; and on the other hand, when the Air is contaminated and corrupted with heterogeneous Particles, it must destroy the Texture of the Blood and Juices. Therfore people who are troubled with the Gout should endeavor to live in the most serene and clear Air that possibly they can, and avoid that which is thick and foggy, and full of extraneous particles;

for if such Air will contaminat and destroy the Texture of the Blood and Juices of those who are in a state of Health, which 'tis plain it will, of consequence it must in a more eminent manner do so to those who have a Distemper already lurking in them, and their Blood and Juices out of order. What will contribute to the preservation of Health in those who enjoy it, will in som measure assist in the cure of Diseases; and on the contrary, what will contribute to the destroying of Health, will also contribute to the bringing on of those Diseases which people have already lurking in their Bodies.

Secondly, *Meat* and *Drink*. People who are troubled with this Distemper ought to be very nice and careful both as to the Quantity and Quality of what they eat and drink. If they excede in Quantity, then they oppress Nature instead of relieving her. As to the Quality they ought to take great heed, and not eat or drink any thing that abounds with such Particles as will either exasperat a Fit when they labor under it, or bring on a Fit when they are free from it. Therfore as to Meat, let it be such as is easy of Digestion, and affords a good Juice, such as *Veal*, *Lamb*, and all sorts of Fowl, whose Flesh is white; and for the Sauce let there be always somwhat with it that is moderatly Acid. The moderat use of all acid Fruits is very convenient, but such as are very luscious and sweet are to be avoid-

avoided. All ſorts of Salads in the Summer time are very good, and in the Winter the hot Salads, ſuch as *Salary*, &c. they generally agreing with moſt peoples Stomachs, and helping Digeſtion. As for Drink, all highly fermented Liquors abounding with vinous Spirits are very bad, and *Brandy* and other Cordial-Waters made of it are as much to be avoided as a mad Dog, or any thing that would certainly cauſe ones Ruin and Deſtruction: Therfore thoſe who drink Wine, would do well to drink the ſmalleſt and thinneſt they can procure, and even with that to mix a ſmall quantity of Water; and whatever they do, let them avoid Debauches. As for thoſe who drink Beer, let it be ſmall and very clear; and if at any time they drink that which is ſtrong, let it be clear and in moderat quantities. *Moyle* and *Pippin Cyders* are admirable Liquors for thoſe who are troubled with the Gout, but they are much better out of the Hogſhead than after they are long bottled. There is an old and a true Maxim, that every Man after he arrives at the Age of Thirty, is either a Fool or a Phyſician: which Maxim is only verified in reſpect to Peoples regulating themſelves in their Diet; it being impoſſible for any Phyſician to lay down a certain Rule of Diet for every body to follow, becauſe there are ſom things that very well agree with the generality of Mankind, yet to ſom are as bad as Poiſon. Therfore the beſt way is for every

man to make nice Observations himself, and use those things he finds agree well with him, and avoid those things he finds do him hurt. I have known *Flummery* that is very acid, taken morning and evening, to be of admirable use to Gouty People: As also the eating of *Cremor Tartari*, made into very fine Pouder, with their Meat, instead of common Salt, and is much more grateful than common Salt. Also the eating of Lemon and Sugar about an hour after dinner, is greatly helping Digestion, and destroys the Matter of this Distemper, and agrees with most peoples Stomachs. *Lemonade*, especially in the Summer-time, is an admirable Drink for gouty People.

Thirdly, *Motion* and *Rest*. Due Exercise and proper Seasons of Rest do as much contribute to the preservation of Health as any thing whatever. But to give any particular Directions about them no man can, som Bodies requiring a great deal more Exercise than others. Yet in general, I think it absolutely necessary for every one to use as much Exercise morning and evening as their Strength will bear; but after Dinner to rest two or three hours without sleeping, that being very pernicious at that time. The Exercise they use should be such as will make them perspire well, but not so much as to make them sweat; for in much sweating there is a great expence of Spirits, as well as a discharge of the superfluous and noxious Juices, by which means the

the Body may ſuſtain a great deal of prejudice. There muſt be alſo great care taken not to expoſe the Body to the Air in a cold and moiſt Seaſon after any violent Exerciſe, which ſuddenly ſhuts the Pores, and cauſes a ſtagnation of the Juices.

Fourthly, *Sleep* and *Watchfulneſs*. As moderat Sleep is the moſt neceſſary thing in the World for us Mortals while in this State; ſo the over-much indulging our ſelves to it brings as many Inconveniences upon us as any thing whatever. The Night, as the moſt natural Seaſon, is appointed for us to ſleep; and according to the moſt general Obſervations, People are more refreſh'd with one hour's ſleep in the night, than with three or four in the day-time. Let People therfore who are ſubject to the Gout avoid ſitting up late at night, but go to bed in good ſeaſon, and riſe early in the morning; and be ſure to let their Suppers be well digeſted before they go to bed: And let them avoid Afternoons ſleep as they would a Serpent, or any other thing that would certainly do them miſchief. Over-much Sleep and over-much Watchfulneſs are equally pernicious, for both of them deſtroy the Tone and Springineſs of the Nerves, and therby hinder Nature from performing its Office in throwing off the excrementitious Particles.

Fifthly, A due *Excretion* of the Excrements, and *Retention* of the good and uſeful Juices.

If any usual Evacuation be stopt, it must be promoted by Art. Costiveness is very pernicious, and on such occasions the Body must be kept open by gentle Lenitives; and the very best thing in the World upon such occasions is half an Ounce of *Cremor Tartar* in a Draught of Flummery or Water-gruel, first in the Morning. If Perspiration be stop'd, it must be promoted by moderat Exercise, *&c.* If there be any preternatural discharge of any of the good and useful Juices, it must by all means be remedied. All these things may be don without mens exposing themselves to live *medicè*, and of consequence *miserè*, according to the common Acceptation; there being nothing that I inculcat but what is pleasant and agreable: But were it not so, Health cannot be purchased at too dear a rate.

Sixthly, and lastly, A due *Regulation* of the Passions.

The Passions of the Mind have a wonderful influence upon the Juices of the Body, and therfore People ought to be very nice in the regulation of them. Anger, and Fear, and Melancholy ought carefully to be avoided, and Cheerfulness of Temper to be kept up as much as possible. I know one man who is never heartily angry, but he is immediatly troubled with the Colic; and another, who after being in a Passion is troubled for two or three days with the most violent Headach imaginable. And I believe there is scarce any man

who

who is not som way or other disorder'd in his Body after a very great perturbation of Mind.

CHAP. III.

SEcondly, To demonstrat the Insufficiency of the Method of Cure both heretofore and at this time in common practised by the generality of Physicians.

For the right performance of which, I shall give you the whole Process of a Method taken by a great Physician, Sir *J. G.* since dead, with a noble Lord. He used all the Alkalious Medicins, both internally and externally, that could be thought on, which instead of taking off his Distemper, exasperated it, and by destroying the Texture of the Blood and Juices brought him into a Dropsy, from which he was not to be retriev'd. The Prescriptions are exactly copied from the Originals, which are to be seen upon the File at Mr. *Nicolson*'s the Apothecary in *Covent Garden*, who is of that Integrity and Honesty, that I am sure the Prescriptions were faithfully made up. And if *Alkalies* would have don any thing in this case, I am sure here are enough of 'em, and of all sorts, even the most exalted; and among the rest, there was given *Sal Tartari* volatiliz'd, or at least he call'd it so, which he made Mr. *Nicolson* purchase at a dear Rate.

April 8*th*, 1691.

℞ *Aq. Ceraſor. Nig. Flor. Tiliæ, ana dracm. ſex; Cinnamomi Hord. Citri totius, ana unc. ſem. Diacodii unc. unam; Laud. Liquid. Cydon. gut. xii. M. cap. horâ ſomni.*

℞ *Decocti Almari (fact. cum Sennâ, Rhabarb. ana dracm. unc. ſem. Salis Tart. ſcrup. duos; Quinquin. dracm. unam) unc. quatuor; Crem. Tartari dracm. ſem. Syr. Flor. Perſicor. Aq. Cinnamom. Hord. ana unc. ſem. M. cap. horâ ſeptimâ matutinâ ſuperdormiat.*

℞ *Aq. Lactis Alex. Ceraſor. Nig. ana unc. quatuor; Peoniæ Compoſ. Cinnam. Hord. Protheriacalis, ana un. unam; Perlar. pr. Oculor. Caneri pr. ana dracm. duas; Alkermes dracm. quinque; Syr. Flor. Tunicæ unc. unam. M. Cap. Cochlear. tria vel quatuor, prout neceſſitas poſtulabit.*

April 9*th*.

℞ *Aq. Regin. Hungar. unc. quinque; Tinct. Caſt. S. V. extract. Tinct. Croci S. V. extract. ana unc. tres; Tinct. Opii S. V. extract. unc. duas ſemis; Camphoræ dracm.*

dracm. quinque; Sacchari Saturni dracm. quatuor. M.

℞ *Emp. de Sapone unc. tres; Opii soluti & inspissati dracm. duas sem. Camphoræ dracm. duas; Sacchari Saturni dracm. tres. M. f. Emplast.*

℞ *Aq. Lactis Alex. dracm. sex; Spir. Menthæ, Peon. Comp. ana unc. semis; Diacodii unc. unam; Laud. Liq. Lond. gut. xviii. M. cap. horâ somni.*

℞ *Ol. Mac. per Exp. unc. semis; Balsam. Lucatulli unc. unam; Balsam. de Gilead. dracm. tres; Ol. Stil. Lumb. terrest. Stil. Absynthii, Garriophillor. ana dracm. unam.*

M. cum quo inungetur Regio Ventriculi ad minimum bis in die, post injunctionem applicetur isti Regioni Empl. de Theriacâ Venet.

℞ *Conchar. pr. Oculor. Cancri, ana gr.* xiii. *Salis Absinth, scrup. semis; Cinnabar. nativi gr. octo. Cap. mane crastino die cum Cochlear. Julap. prius præscript. superbibendo Cochlear. tria ejusdem. Repetatur pul. præced. horâ septimâ vespert. addendo Laud. Opiati gr.* iii.

April

April 12*th*.

℞ *Gummi Ammon. purifs. Mastiches, Thuris, ana dracm. duas; Succini pr. Oculor. Cancri, Corallii Rub. ana dracm. unam; Cinnabaris nativi, Sacchari Saturni, ana dracm. tres; Milleped. pr. unc. semis; Castor. dracm. unam; Croci dracm. tres; Salis Volatilis succini dracm. un. sem. Viperar. dracm. duas; Camphoræ scrup. duos, cum q. s. Ammoniaci sine Acido solut. & inspissat. F. Pil. Sig.* The altering Pills.

℞ *Aq. Reg. Hung. unc. quatuor; Tinct. Castor. S. V. ext. Tinct. Croci S. V. ext. ana unc. duas; Tinct. Opii S. V. ext. unc. sex; Sp. Lumbricor. unc. sex; Camphoræ dracm. quinque; Sacchari Saturni unc. semis. M. Signetur,* The Mixture for external Application.

℞ *Empl. de Vigo 4to Mercurio, De Ammon. cum cicuta, ana unc. tres; Camphoræ dracm. quatuor; Sacchari Saturn. dracm. quinque; Opii solut. sine acido & inspissa. unc. semis. Sine ignis calore mixt. f. Magdaleon:* adde, *Castorei, Croci, ana unc. semis; Sp. Lumbricor. q. s. ad Malaxationem.*

April

April 15*th.*

℞ *Balſam. Lucatulli unc. duas; Ol. Macis per Expreſ. dracm. unam; Axung. Urſi, Anſeris, ana unc. ſemis; Balſ. de Gilead. dracm. ſex; Ol. Succini, Petrolei, ana unc. ſem. Ol. deſtillat. Cinnamom. dracm. ſex; Spir. Lumbricorum, Formicar. ana dracm. tres; Ol. deſtillati Buxi dracm. duas; Garriophillor. dracm. duas ſemis; Camphoræ dracm. ſex; Ol. Laurini, Hyperici, Rutæ, ana un. ſemis. M. f. Linimentum, pro externa applicat. part. affect.*

April 19*th.*

℞ *Spirit. Cochlear. unc. duas; Diaſcordii dracm. tres; Aq. ſperm. Ranar. unc. unam ſem. Regin. Hungar. unc. unam; Laud. Lig. gut.* 40. *M.*
Signetur, The Waſh for the Gums.

℞ *Coral. pr. Oſſis ſepiæ ſubt. pul. Lapis ſpongiæ, ana dracm. tres; Terræ Catechu. Sacchari Saturn. ana dracm. duas, cum Mellis Roſati q. ſ. f. Opiatum.*
Seg. The Opiat for the Gums.

April

April 20*th*.

℞ *Aq. Ceraſor. nig. unc. unam ſemis; Lactis Alexit. Sp. Menthæ, Diacodii, ana unc. unam; Aq. Gentian. comp. dracm. tres; Oculor. Cancri ſcrup. unum. Laud. liquid. gut.* 15. *M. Sig.* The quieting Potion.

April 22*d*.

℞ *Hederæ Terreſt. Parietariæ, Malvæ, ana M. unum; Flor. Chamomillæ, Meliloti, Sambuci, ana p. unum, f. decoct. in q. ſ. Aq. font. & coletur hujus Colaturæ.* ℞ *unc. ſex; Vini emet. unc. duas; Diacathol. Mell. Mercurialis, ana unc. ſex; Ol. Laurini unc. unam. M. f. Gliſt. detur quam primum.*

℞ *Diaſcordii dracm. unam; Oculor. Cancri ſcrup. unum; Salis volat. ſuccini, Bezoar. Mineral. ana gr.* XXV. *Laud. Opiati gr. tria; Alkermes ſcrup. unum, cum ſyr. Papav. Alb. q. ſ. f. Opiatum, detur hora ſomni.*

April 25*th*.

℞ *Decoct. Amari (fact. cum Sennæ dracm. duab. Rabarb. dracm. una; Salis Tart. ſcrup. duob.) unc. quatuor; Syr. Flor. Perſicor.*

Persicor. unc. unam; Aq. Cinnamomi unc. unam; Cremor. Tart. solub. dracm. unam. M. f. potio, cap. cras mane.

April 30*th.*

℞ *Ext. Rudii scrup. duos; Sal. Tart. gr. sex. M. f. Pil. n. quinque, cap. horâ sextâ aut septimâ mane.*

℞ *Aq. Gentian. Comp. Absynth. Comp. ana unc. tres; Sp. Lavend. Comp. Spirit. Menthæ, ana unc. duas; Tinct. Bezoard. unc. unam; Spirit. Castor. dracm. tres; Conf. Alkermes unc. semis; Syr. Flor. Tunicæ unc. unam; Laud. Liquid. dracm. tres. M. Signetur,* The Cordial.

May 29*th.*

℞ *Aq. Mirabilis unc. tres; Spirit. Menthæ unc. quatuor. M. pro Vehiculo laud. opiati. Pul. E. Chelis Cancror. dracm. semis.*

May 31*st.*

℞ *Theriacæ Venet. Diascordii, ana dracm. unam; Alkermes Comp. scrup. unum; Salis volat. succini, Bezoard. Min. ana dracm. semis; Laud. Opiat. gr. quatuor. M. Cap. ante cubitum.*

June

June 1*st*.
Repetatur Opiatum præced.

June 4*th*.

℞ *Oculor. Cancri gr.* xvi. *Cinabaris Nativi gr. novem; Pul. e Chelis Comp. gr. quindecem; Laud. Opiati gr. tria. M. f. Pul. cap. ante horam somni.*

Here are Alkalies and Opiats with a witness: but it is to be noted that most of these Prescriptions were several times repeated, yet instead of being any way serviceable, exasperated the Symtoms, and not only fixt the morbific Matter upon the affected Parts, but destroy'd the Texture of the Blood to such a degree, that a Dropsy followed, which proved of fatal consequence.

The Medicins here prescrib'd are those that are generally used by most Physicians; and if ever any body receiv'd advantage by them, I dare be burnt: and that ever Men should have such dull Fancies, as not to vary from a Method that has never once stood them in any stead, looks very odd. And as for Alkalious Medicins in general, I dare be positive that they never yet cur'd any one Distemper, but very frequently have don a great deal of mischief; they being given in acute Distempers, Nature her self there throws off the Load,

Load, if she be strong and vigorous, in spite of them: But if poor Nature be weak, they add to the Load, and she falls under it. And the only reason why we don't see Fevers and other acute Diseases cur'd every day without waiting for a Crisis, is because the Medicins generally given are of the very same nature with the morbific Matter, and of consequence must prolong the Course of the Distemper. I have frequently observed in Epidemic Fevers, that Number for Number of the Sick, there have at least two for one died of those who have made use of Physicians, to those whose Fortunes would not permit them so to do; and pray what should be the reason of this, but that the Poor who took no Physic, or at least no Alkalies to expel Malignity, as they call it, but drank either Water, sour small Beer, or som such things, should recover when the rich ones die; and that the one by their Alkalies, instead of expelling increased the Malignity, when the other by their mean but well-suted Remedies conquer'd their Distemper? In Chronical Distempers, such as the Gout, *&c.* poor Mortals are let alone to languish under their Oppression, and the Physician, like one of *Job*'s Comforters, gravely tells them, *Solvere nodosam nescit Medicina Podagram*; but yet after all the fruitless Attemts that have bin made, will be for putting the poor Wretch into a Course of Alkalies to correct those luxuriant

acid

acid Particles with which he would fain perſuade his Patient that his Blood abounds (tho he never found any ſuch thing there) to the pauling of his Stomach, and exaſperating his Diſtemper: and if ever the poor Patient finds relief, it is from the Opium that is between whiles given; and if from that he has any little intermiſſion of his Pain, they are generally ſo ungrateful as not to ſet the ſaddle upon the right Horſe, to give the *Opium* its due, but preſently hug themſelves, and cry, God a mercy Alkalies, and ſo go on with a *Repetatur Pul. E Chelis*, &c. But moſt Gentlemen have now ſeen ſo much of the Fallacy of this Method, that they patiently endure a Fit of the Gout, without ſo much as once ſending for a Phyſician; ſo that if we do not look about us and endeavor to regain our Reputation, we may chance to be laid aſide in other Diſtempers as well as the Gout. *Helmont* ſomwhere ſays, he that can't cure a Fever in four or ſix days, dos not deſerve the Name of a Phyſician; which if true, I am afraid Phyſicians are not to be found in every Street. And I preſume to ſay, That a Phyſician ſhews his skill more in curing one Chronical Diſtemper, than in a hundred Acute ones: for Nature would do that work her ſelf in the time we generally do it, without our help, and frequently, as the Tide runs, better without than with. What I have ſaid is not to reproach the Phyſicians of our own Nation, who are many of 'em

'em as great Men as ever were of the Profeſſion, and generally this City abounds with ſuch; but my deſign is to undeceive young Phyſicians, who have bin impoſed upon by Foren Authors, and to excite them not to rely upon men who have broached the Chimeras of their own Brain without making Experiments, to try whether their Notions were true or falſe. But to return to my buſineſs.

If the Blood's abounding with *Alkalious* Particles be the primary or fundamental Cauſe of the Gout, how can the giving of Alkalies be of any uſe? of no other uſe than the throwing a Load of dried Faggots upon a Houſe that is on fire would be to extinguiſh the Flames; and whoever ſhould attemt ſuch a thing, would be accounted little leſs than a Mad-man. And now it is in my mind, give me leave to inſert a Relation I had from Mr. *Yardly* a Glover of *Worceſter*, the moſt ingenious Man perhaps that ever was of his Trade; he being (which is very ſtrange for one of ſo mechanic and mean a Trade) a curious Philoſopher, and a nice Obſerver of things: He tells me that in the making of their Leather, they firſt throw their Skins into a Pit filled with a ſtrong Alkalious *Lixivium*, which in a manner rots them; afterwards they make a ſtrong acid Solution, into which they throw their almoſt rotten Skins, which again reduces them to their Texture, nay makes them firmer than they were at firſt: from whence

it may naturally be infer'd, that Alkalies break the Texture, and destroy the Parts of animal Sustances; and that moderat Acids preserve them, and restore them to their Tone and Texture, when before spoiled by Alkalies. It has bin an old and receiv'd Maxim, that *Similia Similibus gaudent, & Contraria Contrariis curantur.* If the Blood abounds with Alkalies before, and so causes a Distemper, the giving of Alkalious Medicins must increase the quantity of the morbific Matter, and so heighten the Distemper by exasperating the Symtoms; unless 'tis pretended that one Alkaly will destroy another, which I am sure is false, there being an amicable correspondence between them all, the fixt Alkalies mixing with volatils, and all the volatil and fixt ones with one another, without the least *luctus* or strife: so it is plain that Alkalious Medicins will readily mix with the Alkaly they find in the Blood and Juices, and by inreasing the quantity of the morbific Matter, as before said, must exasperat and increase the Distemper; wheras Acids which are contrary to Alkalies (there being a Conflict between them wherever they meet) given in due proportion, will lessen the Matter of the Distemper, and in time totally extirpat it. But this is a hard saying, and difficult to be understood, especially by those who have not a mind to be inform'd.

I have in another place * given ſom more Reaſons for my diſſent to the uſe of Alkalies in the Cure of this Diſtemper, which for brevity ſake I ſhall not repeat; however I think thoſe Gentlemen who perſiſt in the uſe of Alkalious Medicins are very happy, *Quoniam Succeſſus eorum Sol videt; Errores autem Tellus opperiret:* Becauſe the Sun ſees their good Succeſſes, but their Errors are hid in the Ground, that is, in the Grave. If Nature be ſo ſtrong as to conquer the Diſtemper, the Phyſician has the Reputation of it; but if the Patient dies, he never tells any Tales: Yet had we the opportunity of converſing with our departed Friends in their ſeparat State, I am afraid they would tell us many diſmal Stories, by what means they were ſent packing into another World.

I have made a ſlight Reflection upon the exorbitant quantity of *Opium* preſcrib'd in the foremention'd Caſe: yet I would not have people believe that I utterly diſallow the Uſe of *Opium* and the ſeveral Preparations of it in this Caſe; but on the contrary, I uſe it, not only in this, but in all other Diſtempers attended with Pain, and think it one of the greateſt Bleſſings that ever God Almighty beſtowed upon the Commonwealth of Phyſic. For all which I cannot ſay I ever once ſaw any one Diſtemper cur'd by the uſe of Opium a-

* *Eſſay concerning* Alkaly *and* Acid.

lone; but however it dos us so much service as to allay the Orgasm of the Spirits, and eases the Pain, by which means we gain time to give such Medicins as are proper to eradicat the Distemper. I shall presume to give an Instance of it in a very extraordinary Case, tho somwhat different from the Subject in hand. I was sent for about six years ago to a person in an Iliac Passion, wherin the peristaltic Motion of the Guts was totally inverted, the Patient vomiting up his Excrements, and stinking so abominably that no one could endure the Room where he lay. I gave him two or three very sharp Clisters, to draw the Matter downwards, but he presently vomited them out at his Mouth. I gave him a Dose or two of purging Pills, with som cordial Stomachic Julaps, which he vomited up again the very instant he took them. At last seeing him in the utmost Extremity, I gave him 10 grains of crude *Opium* made into Pills, which he retain'd in his Stomach, and began to grow dosy. After he had continued so about an hour, I gave him the following Pills.

℞ *Ext. Rudii scrup. duos; Ol. Garriophyll. gut. decem. M. f. Massa, ex quâ formentur Pil. N°. sex, statim assumend.*

After these Pills had bin in his Stomach about an hour and half, I gave him the following Clister.

℞

℞ *Flor. Chamomil. M. duos; Baccar. Junip. unc. tres; Sem. Anniſi, Carrui, ana unc. unam; Rad. Hellebori nig. unc. ſemis; Colocynthydos dracm. duas; Aq. Font.* ℔ *duas; coquantur ad dimidiæ partis conſumpt. & coletur: Colaturæ adde Syr. e Rhamno Cathart. unc. duas, Ol. Anniſi gut. xxx. M. f. Enemâ, ſtatim injiciend.*

After the Cliſter had bin injected about an hour, he had a large Stool, and in two or three hours he had five or ſix more; after which I ſupplied him with Cordials and Carminatives, and his Vomiting never return'd. By this Method I have ſeveral times ſince retrieved many from the very Jaws of Death. Now had I not given that very large quantity of *Opium*, my Purge and Cliſter would have avail'd nothing, by reaſon he would preſently have vomited 'em up; but the *Opium* allaying the *Orgaſm* of the Spirits, the Purge and Cliſter were capable of performing their Office, which otherwiſe they would not have don: and had I not given the Purge and Cliſter as ſoon as the Opium had made all quiet, they would have avail'd nothing, and the Opium alone would have ſtood me in no ſtead, as I have twice ſeen; for as ſoon as its Operation had bin over, the Vomiting would have return'd with as great violence as ever. So in the violent Fits of the Gout the giving of Opium

makes the Patient easy, and by that means proper Medicins have many times the better effect; but I cannot allow the use of Opium and Alkalies together, because the Alkalies by the means of Opium are longer retain'd, and therby do the greater mischief. But of what use the applying of Opium externally can be, I could never understand, unless to fix the morbific Matter on the Part affected, and so prolong the Distemper. The Learned and Ingenious Dr. *Jones* has promised us e're long a complete History of *Opium*, and therfore I shall dwell no longer upon it.

Besides the external Application of Opium, there was constantly applied to the affected Parts an Emplaster of *Emp. de Sapone*, &c. which never did any service: I have also known it used by forty other people without any effect at all, unless to exasperat and increase the Pain. Now Soap is a Composition made of nothing else but a fix'd Alkaly and Oil. And the Parts affected with the Gout being turgid with Alkalious Substances, I cannot understand with what shew of Reason people can apply Alkalies in such Cases.

[And as a farther proof of the insufficiency of Alkalies internally taken, I shall presume to relate the following Case.

In *July* 97, I was sent for to a Gentleman eminently known about this Town, who for many years had bin miserably tormented with the Gout, and was becom a perfect Cripple, not able to walk, stand, or turn himself

in his Bed. Now he being a man very agreable in his Converſation, and of almoſt univerſal acquaintance, had an opportunity of relating the miſerableneſs of his Circumſtances to many Phyſicians, ſom of whom were of the firſt rank: they all, from the higheſt to the loweſt, generally agreed that the only occaſion of his being ſo ſadly tormented, proceded from the ſuperabundance of Acids in his Blood and Juices; and therfore adviſed him, as the only effectual way to preſerve himſelf from falling a Victim to his Diſtemper, to take Alkalious Medicins in large quantities, purſuant to which directions he conſtantly carried about him a large Box of Teſtaceous Pouders, and ſeldom failed to take an Ounce or two of them every day; in ſpite of which his Diſtemper continually gain'd ground of him, ſo as to make him a perfect Cripple as aforeſaid. At laſt meeting with the firſt Edition of this Tract, and carefully reading it, he was in part convinced that his Phyſicians had bin miſtaken, and that he was miſinform'd as to the true Cauſe of his Diſtemper; wherupon he ſent for me. As ſoon as I came into the Room to him, he threw his Box of Alkalious Pouder into the Fire, uſing the following Expreſſion: I took theſe Alkalious Pouders to be my Guardian Angels, but on the contrary I find by experience they have bin no leſs than tormenting Devils, and therefore for God's ſake afford me your aſſiſtance in order to re-

medy the Inconveniences I labor under on the score of my Distemper and these damn'd Pouders. Upon which I put him into a Course of Acids that soon abated his Pains, from which he had scarce bin free for six months together; and by continuing the use of them, he has in som measure recovered the use of his Limbs. I could now give forty instances of People made miserable by the internal and external use of Alkalies, who have bin retrieved from their Calamity by the internal and external use of Acids.

As for Topics, I have known many, who have applied Spirit of *Sal Armoniac*, &c. to the affected Parts, with the worst succes imaginable.]

But som may say, how can Topics have any effect at all in this or any other case? How can there be any Communication between the Matter applied and the Matter of the Distemper, when the Skin at least, if not som other Membranes, do interpose between the one and the other?

To which I answer: That the Skin abounds with Receptory as well as Excretory Pores, which I have frequently observ'd in the Skins of many Animals by my Optic Glasses; by means of which Receptory Pores there may be a comm unication between the Medicin applied outwardly and the Matter of the Distemper, so as the one may act upon the other. To prove which, it is well known there are

many things, that being applied to the Belly will cause as violent Purgations, as if a strong Purge had bin taken at the Mouth. Also the strange and sudden effects of Medicins applied to Parts affected with the Gout, do demonstrat that there is a Communication between the Medicin applied and the Matter of the Distemper, by means of the said Receptory Pores: For I have more than once known people perfectly freed from the most intolerable Pain in half an hour, by the use of the Balsam hereafter mentioned.

CHAP. IV.

I Shall now procede to my own Method of Cure, which, tho it be very easy and plain, I thank God has very seldom fail'd me. And if I have bin called as soon as the first Symtoms of the Distemper appear'd, I have generally carried it off without suffering it to fix on any Part. As for instance; When my Patient complains of a Crudity and Rawness of his Stomach, with a windy sort of Distension and Heaviness of his Body, which are certain Arguments of an approaching Fit; if he be of a Sanguin Complexion, and a Plethoric Habit of Body, I first of all prescribe Blood-letting, from twelve to twenty Ounces, according to the Patient's Strength: I then order

order the following Tincture to be taken night and morning for about three days.

℞ *Spec. Hieræ Picræ* ʒij. *vel* ʒi. *Tart. Vitriolati, Cremor Tartari, ana drac. unam semis; Spirit. Vini rect. unc. sex. Infunde clausè & calidè per horas duodecem, & decant. Tinct. clara, cap. Cochlear. unum primò manè & horâ decubitus in haust. infusionis seq.*

℞ *Rad. Bardanæ unc. duas; Sassafras dracm. sex; Aq. Font.* ℔ *tres. Infunde clausè & calidè per horas duodecem, & coletur; colatura reservetur ad usum.*

During the three days the Tincture is taking, I order 'em to take one of the following Papers of Pouder, half an hour before dinner.

℞ *Cremor. Tartari dracm. tres; Tart. Vitriolat. dracm. unam semis; Sacchari Rosati unc. semis. M. f. Pulvis in tres Chart. distribuend. cap. unam horâ dimidiâ ante Prandium, in haustulo Aq. Lactis.*

[If the Stomach be much paul'd, and the Patient not very feverish, I add to each Paper two or three drops of Oil of Cloves.]

After the three days wherin the Tincture is taken, I order the following Pouders to be taken for about a fortnight, four times a day at due Intervals.

℞

℞ *Tart. Vitriolati unc. ſemis; Cremor. Tart. unc. unam; Ol. Garriophillor. gut. xx. Sacchari Roſati unc. unam ſemis. M. f. Pul. in octo Chartulas diſtrib. ex quibus cap. unam horâ ſeptimâ manè, & horâ undecimâ, horâ quartâ poſtmeridianâ, & horâ decubitus, in hauſt. infuſionis ſequentis.*

[I here alſo obſerve, that if the Patient either already is, or be much inclined to be feveriſh, either totally to omit the Oil of Cloves, or to uſe it in ſmall quantities.]

℞ *Rad. Eringii ſiccat. unc. unam ſemis; Lig. Saſſafras unc. ſemis; Aq. Font. ℔ tres. Infunde clausè & calidè per horas ſex, & coletur; colatura reſervetur ad uſum.*

In the firſt Draught of Beer, Ale or Wine they drink at dinner, let them take a Sweetmeat ſpoonful of the *Elixir Sulphuris* hereafter mentioned; [or elſe fifteen or twenty Drops of the following Elixir of Vitriol.

Elixir Vitrioli nr.

℞ *Garriophillor. Piperis nigri, ana uncias duas; Sp. Vini Rect. ℔ unam. Infunde clausè & calidè per dies ſeptem; poſtea adde Olei Vitrioli opt. rect. unc. quatuor. Infunde iterum*

iterum per dies septem; postea decantetur [*Elixir clara.*]

After this Fortnight, if the forementionʼd Symtoms disappear, and the Fit be put off, which for the most part it will, I order the following Medicins to be taken for about three weeks or a month, first in the morning and last at night.

℞ *Lapidis Hæmatitis unc. semis; Cremor. Tart. unc. unam; Ol. Sassafras gut. quadraginti. M. f. Pul in octo chartulas distrib. ex quibus cap. unam in Cochlear. Syr. Balsamici Tolut. superbibendo uncias sex vel octo Infusionis sequentis.*

℞ *Rad. Eringii siccator. unc. duas; Sem. Bardanæ, Fraxini, ana unc. semis; Aq. Font. ℔ tres. Infunde clausè & calidè per horas octo, & coletur; colatura reservetur ad usum.*

If they are at any time thirsty, let them drink plentifully of *Lemmonade,* with a small quantity of Wine in it. And since I have in other places, and shall hereafter have occasion to prescribe *Lemmonade,* lest there should be any who understand not how to make it, I shall here insert it.

Take

Take of clear Spring-Water one quart; then pare off the outward thin Rine of two Lemmons, and put into it; afterwards ſqueeze in the Juice of the Lemmons, and then ſweeten it with about two Ounces of fine Sugar.

This is the moſt grateful Liquor in the World: but if it be too cold for any ones Stomach, it may be made a little warm with half a pint of Old Hock.

[Inſtead of the Lemmonade they may at any time when thirſty, drink a draught of Claret and Water well acidulated with dulcified Oil of *Vitriol* made by digeſtion.]

If the foremention'd Symtoms appear, and the Party be of a phlegmatic Conſtitution (tho very few ſuch are troubled with the Gout) I then alter my Method, and for the firſt week give 'em the following Tincture, by which I have don wonderful things in other Diſtempers beſides that of the Gout.

℞ *Gum. Guaiaci Pul. unc. duas; Succi Liquiritiæ Hiſpan. in tenuiſſim. Taleolas inciſi uncias quatuor; Sp. Vini Rect. ℔ unam. Infunde clausè & calidè per duos dies, & poſtea decantetur Tinctura clara, cap. Cochlear.. unum primò manè & horâ decubitus in hauſt. Infuſ. ſequentis.*

℞

℞ *Rad. Ering. unc. unam; Sassafras dracm. sex; Vini Rhenani vet.* ℔ *unam; Aq. Font.* ℔ *unam semis. Infunde clausè & calidè per horas quatuor, & coletur; colatura reservetur ad usum.*

An hour before dinner I give 'em a Paper of the following Pouder in a draught of Milk Water.

℞ *Tart. Vitriolati dracm. duas; Cremor. Tartari unc. unam; Ol. Garriophillor. gut. 24. Sacchari rosati unc. unam. M. f. Pul. in sex Chartulas distribuend. cap. unam horâ unâ ante prandium in haustulo Aq. Lactis.*

For about a Fortnight longer I put them into a Course of *Lapis Hæmatitis*, &c. as follows.

℞ *Lapidis Hæmatitis unc. semis; Cremor. Tartari unc. unam; Ol. Sassafras gut. quadragint. M. f. Pulvis in octo Chartulas distribuend. ex quibus cap. unam primò manè & horâ decubitus in Cochlear. Syrupi Balsam. superbibendo circiter uncias sex Infusionis sequentis.*

℞ *Rad. Eringii siccat. unc. duas; Sem. Bardanæ, Fraxini, ana unc. semis; Vini Rhenani vet.* ℔ *unam; Aq. Font.* ℔ *unam*

unam semis. Infunde clausè & calidè per horas sex, & coletur; colatura reservetur ad usum.

[And sometimes, instead of the forementioned Course with *Lapis Hæmatitis*, I order the following Steel Course.

℞ *Cardamomi, Cubeb. Galangæ, Nucis Moscatæ, ana* ʒi. *sem. Cardui dracm. tres; Flor. Centaurii pug. tres; Fol. Marrubii Albi, Scordii, ana pug. duos; Calibis cum Aceto præp. unc. duas; Vini albi* ℔ *duas. Infunde frigidè per horas* 48. *postea cap. Cochlearia sex, primò manè & horâ sextâ Vesperi; coletur tempore usus.*]

While they are taking these things, it will be convenient in the first Draught of Beer, Ale, Wine, or Wine and Water they drink at or just before dinner, to take a Sweat-meat spoonful of *Elixir Sulphuris*, [or else fifteen or twenty drops of the *Elix. Vitrioli.*]

If they are at any time very thirsty, they may drink Lemmonade; and if what they eat dos not digest well, they may about an hour after dinner eat the Pulp of a Lemmon cut into slices, with som double-refin'd Sugar, it greatly helping Digestion, and strengthning the Stomach. [But if thro Indigestion they are much troubled with Wind, I prescribe the plentiful use of the digestive Pouder mention'd

in

in my Essay, which I shall here again insert.

Pul. Digest. Nr.

℞ *Cardamomi, Cubebar. Galangæ, ana drac. unam; Cremoris Tartari dracm tres; Sacchari Rosati dracm. sex. M. f. pul. digestivus in pixide reservand. cap. quant. Apice linguæ lingi potest sæpe in die, precipuè post prandium.*]

I have prescribed *Lapis Hæmatitis*, which I have found in many Cases to be a noble Medicin, and more especially in this I am treating of; and since I have mentioned it, I shall presume to transcribe what *Polemanus* in his Treatise *De Sulphure Philosophorum*, says of it, the reading of which first induc'd me to try what it would do.

He thus begins. 'Paracelsus teaching us in 'what Subjects the *Primum Ens*, or first Matter of Gold is to be found, which is the true 'Sulphur of the Philosophers, among other 'Subjects mentions *Lapis Hæmatitis*, in which 'he says it is principally and very plentiful, it 'being impregnated with the *Primum Ens*, 'or first Matter of Gold, in all its parts; from 'whence being reduc'd into impalpable Pouder, it performs wonderful things in Physic. 'To confirm the Truth of which, he says there 'was a poor *Scots-man* in the City of *Hamburgh*, who perform'd such wonderful Cures, 'that

'that the whole City was astonish'd at it; at 'last by the Envy of som wicked men, the 'poor man was poison'd, and his Loss was so 'generally lamented, that the Magistrats of-'fer'd a very great Sum of Mony to any one 'that would discover the Murderer. This '*Scots-man* (says *Polemanus*) used no other 'Remedy than *Lapis Hæmatitis* made into fine 'Pouder, and mix'd with Oil of Fennel Seeds, 'as he was inform'd by the Prince of *Anhalt*, 'to whom the *Scots-man* had discover'd this 'Secret.

He afterwards gos on: 'The Virtues of 'this *Hæmatitis* are so esteem'd by the common 'people of many Provinces, that they use it as a '*Panacea* in all Diseases. I went to a certain Fair 'from my Father-in-law's House at *Regiomon-'tanum*, taking along with me a Country 'Servant; and going into a Merchant's Shop 'where they sold Whetstones, Fire-stones and '*Hæmatites*, my Servant humbly beseech'd me 'to give him one of those Red Stones (the 'Name of which he knew not, meaning the '*Hæmatitis*) for his Fairing. I ask'd him 'to what use he would put it? Sir, says he, 'if you did but know the Value of this Stone, 'you would highly esteem it; for it is the only 'Medicin we use in all our Distempers, being 'made into Pouder, and mix'd with a little 'Vinegar. Being return'd to my Father-in-'law's, I inquired into the Truth of this mat-'ter, and my Father-in-law assur'd me, that

'not only the Poor of the Place where he liv'd,
'bnt for many Miles distance, made use of *Hæ-*
'*matites* in all their Diseases.

'The Signature of *Hæmatitis* dos indicat its
'Golden Virtues, not as to its external Appear-
'ance, but after it has bin dissolv'd. If you
'make an *Aqua Regis*, by distilling Spirit of
'Niter from Sea-Salt (the common *Aqua Re-*
'*gis* made of *Aqua Fortis* and *Sal Armoniac*
'will dissolve little or nothing of it) and dis-
'solve in it som *Hæmatitis* made into fine Pouder,
'and in the same *Aqua Regis* dissolve som pure
'Gold; if you compare the two Solutions to-
'gether, you will find little or no difference,
'only the Solution of the *Hæmatitis* in its
'sparkling Gold Color seems to outdo the o-
'ther. Do not admire, friendly Reader, that
'with *Paracelsus* I allow the *Primum Ens*, or
'first Matter of Gold to be contain'd in other
'Subjects besides that of Gold it self. And that
'they do contain the said *Primum Ens*, or Sul-
'phur of the Philosophers, their manifold Vir-
'tues witness. Thus far *Polemanus*, the Ex-
positor of *Helmont*.

I have hitherto but just entred into the Porch, proposing a Method to stave off this cruel Tyrant on the first notice of his appearance: and *Principiis Obsta*, is what every prudent man ought to observe; it's easier to keep an Enemy out of a City, than to drive him out after he has taken possession.

I have rarely known violent Purgers do any ſervice (tho frequently a great deal of miſchief) either in the firſt approaches of this Diſtemper, or after the morbific Matter has fix'd upon any part. But gentle Lenitives and proper Alteratives are things that will do us ſervice. What I have preſcrib'd has generally that effect, gently throwing off all the excrementitious Particles by the proper Emunctories, altering the ill habit of the Blood and Juices, and confirming the Tone and Texture of the Parts.

I ſhall now procede to the Cure of the Diſtemper it ſelf, the taming of this fierce and angry Lion, the expelling of the raging Tyrant, the cutting off this *Hydra*'s Heads.

The Indications of Cure during the time of a Fit are twofold.

Firſt; The eaſing and taking off the moſt intolerable Pain.

Secondly; The correcting and carrying off the morbific Matter.

Both which things the following Method will very rarely fail to effect.

When I com to a Patient who has a Fit of the Gout, let it be a regular or irregular one it matters not, the Indications of Cure, and the Matter cauſing the Diſtemper being the ſame; reſpect muſt be had to the Age and Conſtitution of the Patient, and his former way of living; and according as theſe vary,

in som respects the Prescriptions must be vary'd. But my Design being to give a general account of the cure of the Gout, I leave those little Variations that are to be made to the Judgment and Discretion of every Physician.

I first of all, if there are Indications that require it, as generally there be, prescribe Bloodletting from 12 to 20 Ounces, more or less, as occasion requires. I afterwards order the following Medicins to be taken once in four hours; [the Doses of which are either to be lessened or increased according to the Strength and Constitution of the Patient: but this ought always to be observed, that they must be given in such quantities, as to occasion two, three, or four Stools in twenty four hours. Now the Strength and Constitutions of People being so various, it is impossible to prescribe a determinat quantity for every body in a general Treatise. But the generality of Physicians having given *Cremor Tartari* and *Tartarum Vitriolatum* in such inconsiderable Doses, I have chosen to proportion my Doses of them for the strongest Bodies, that I might excite my Brethren to a more liberal use of 'em.]

℞ *Cremor. Tartari unc. unam; Tartari Vitriolati dracm. duas; Ol. Garriophillor. gut. viginti. M. f. Pulvis in quatuor Chartulas distrib. ex quibus cap. unam quartâ quâque horâ in Cochlear. syrup. Balsam. Tolutani, superbibendo uncias quatuor Infusionis sequentis.* ℞

℞ *Rad. Eringii ſiccat. unc. duas; Lig. Saſſafras dracm. ſex; Aq. Font.* ℔ *tres. Infunde clausè & calidè per horas ſex, & coletur; colaturæ libris duabus, adde Elix. Sulphuris dracmas tres. M.*

Let them drink for their conſtant Drink the following Julep.

℞ *Vini Rhenani veteris, Aq. Fontan. ana* ℔ *unam ſemis; Elix. Sulphuris unc. ſemis; Sacchari Albiſſimi unc. unam ſemis. M. f. Julap. cap. pro potu ordinario.*

For change ſake, by reaſon that People are ſubject to be tired with the conſtant uſe of any one thing, inſtead of the former Julep for their conſtant Drink they may drink either Lemmonade, or Barly-water acidulated with Oil of Sulphur, and ſweetned with double-refin'd Sugar; [or elſe Claret and Water, ſweetned with Sugar, and acidulated with dulcified Oil of *Vitriol:* and frequently I allow 'em to drink a Glaſs or two of Claret alone.]

To take off the Pain, I apply the following Balſam to the Part affected twice a day, to wit morning and evening, till the Pain abates or gos off. I order it to be uſed in the following manner: Let ſom of it be applied to the Part affected, and with a warm hand be rub'd in in for a quarter of an hour; then apply a

piece of soft brown paper, and upon that Flannel Cloths three or four double. After using this two or three times, there will little Heats and Blisters arise on the Part, from which for the most part is discharg'd a very great quantity of acrid *Serum*. The Virtues of this Balsam are so great, especially in this Case, that it deserves to be written in Letters of Gold, and yet the Preparation of it is most simple and easy, as all good Medicins are.

℞ *Olei Olivarum uncias octo, Olei Vitrioli optimè rectificati uncias duas; optimè misceantur in Vase vitreo, Collo aperto, & statim fiat Balsamum rubicundissimum.*

If the *Oleum Vitrioli* be not exactly well rectified and very strong, they will not mix; but if it be, they will immediatly be converted into a Balsam as thick as Treacle, and after it has stood a month or six weeks, it will becom of the consistence of *Lucatully*'s Balsam with a greyish Coat on the top. I have already communicated this to many people, and receiv'd Thanks for it from several parts of *England*.

Besides the foremention'd Balsam, the following *Lixivium* is an admirable thing; I have known it do wonders somtimes: but I am afraid it is not so much to be relied on as the Balsam is, tho by the use of it alone I have known Gouts of half a year's standing cured.

* ℞

℞ *Urinæ Vaccæ libras quatuor, bulliatur parum; tunc adde Salis Marini libras tres, & iterum bulliantur donec Sal dissolvitur; cum hoc Lixivio optimè foveantur partes affectæ, relinquendo in partes pannum laneum calidum ter duplicatum, in Lixivio madefacto & Liquore cum manibus fortiter expresso.*

Let this be repeated morning and evening till the Pain is abated and gon.

[For near these two years I have not at all used the *Lixivium*, but always relied either on the Balsam or one of the following Medicins: and to People whose Skins are very tender, I have chose rather to use one of the following Medicins than the Balsam; and in som Cases where the Pains have bin extreme, and the Tone of the Parts much spoiled, I have made use of both, first the Fomentation, and then the Embrocation, applying afterwards a warm Flannel Cloth.

The Fomentation.

℞ *Flor. Sambuci, Chamomillæ, ana M. unum; Flor. Anthos, Lavendulæ, ana M. ss. Aceti Vini Albi, vel Pomor. Sylvest.* ℔ *tres. Infunde clausè & calidè in vase terreo vitriato, per horas tres, & coletur; cum colaturâ foveantur partes affectæ bis in die, superponendo pannum laneum.*

The Embrocation.

℞ *Ol. Vitrioli Dul. per digest. fact. unc. unam; Sp. Vini Com. unc. octo. M. f. Mixtura, cum quâ embrocentur partes affectæ manè & serò, superponendo pannum laneum.*]

Neither of these things will relax the Tone of the Parts, nor repel the morbific Matter; but will mortify and correct the one, and confirm the Tone and Texture of the other.

Till the Violence of the Pain is somwhat abated, I every night give an Opiat, either in a liquid or solid Form. As for instance.

℞ *Aq. Lactis Alex. unc. duas, Mirabilis dracm. tres; Syr. Papaveris Rhead. unc. semis; Laud. liquidi gut.* xx, xxx, *vel* xl. *Ol. Sulphuris per Campan. gut. aliquot ad acidum saporem, f. haust. horâ somni assumend. Vel,*

℞ *Theriacæ Androm. dracm.* ii. *Tart. Vitriolati dracm. semis; Laudani Opiati gr. duo. M. f. bolus hora somni assumend. Vel,*

℞ *Diacodii unc. unam, unc. unam semis, vel unc. duas; Olei Sulphuris per Campan. q. s. ad moderatam aciditatem, cap. hora decubitus.*

The

The Dose of *Opiats* may be greater or less, according as people have bin accustom'd to take them; for the more people have bin used to take *Opiats*, the larger quantity they require.

I use *Opiats* on no other score, than to gain time, to stupify and blunt the Senses, till other Medicins can take place: Tho very frequently, nay for the most part I have no occasion to use them at all. [And if people will but be perswaded to omit the use of them, their Fits will always be the shorter; and when they are off, will leave them much more vigorous and strong, than when *Opiats* are used. And therfore of late I have with all imaginable industry endeavored totally to avoid them.]

During this time I forbid the use of Milk, and all Milk Meats, they being very pernicious; but once a day I allow a moderat Meal of any Meat of very easy digestion, if their Stomachs crave it: otherwise order them to eat somtimes Watergruel, or Barlygruel, and somtimes Chicken or Veal Broth; and in every Porringer of either of the said things, instead of common Salt, to put about a quarter of an ounce of *Cremor Tartar*, [or else acidulat it with Juice of Orange or Lemmon.]

When the Violence of the Distemper is in som measure abated, which in som people will be in a short time, in others a longer, according

ing as Nature is more or less debilitated, and the Matter of the Distemper more or less: I say, when the violence of the Distemper is abated, then the foregoing Method must be alter'd, and the following Medicins used.

℞ *Lapidis Hæmatitis unc. semis; Cremoris Tartari unc. unam; Ol. Sassafras gut. 40. M. f. Pul. in quatuor Chartulas distribuend. cap. unam primò manè & horâ decubitus, in Cochlear. Syrup. Balsam. superbibendo haust. Infusionis sequentis.*

℞ *Rad. Bardanæ siccat. unc. quatuor; Baccar. Junip. unc. tres; Sem. Bardanæ, Fraxini, ana dracm. tres; Lig. Sassafras unc. sem. Aq. Font. bullientis ℔ quinque. Infunde clausè & calidè per horas sex, & coletur: Colaturæ sing. libris duabus, adde Elix. Sulphuris dracm. duas. M.*

These things will cause gentle and easy Evacuations, correct the Luxuriant Alkalious Particles, and confirm the Tone of the Parts.

Instead of the foregoing Medicins, I sometimes give these which follow.

℞ *Cinabaris fact. com. optimè levigat. unc. semis; Gum. Guaiaci dracm. tres; Conf. Cynosbati unc. unam semis; Syr. Sambuci q. s. f. Elect. cap. quant. Nucis Moscatæ primò manè & horâ decubitus, superbibendo uncias sex vel octo Infusionis sequentis.* ℞

℞ *Rad. Bardanæ ſiccat. unc. quatuor; Baccar. Juniperi unc. tres; Bardanæ, Fraxini, ana unc. ſemis; Lig. Saſſafras dracm. ſex; Aq. Font. bul. libras quinque. Infunde clausè & calidè per horas ſex, & coletur; Colaturæ libris duabus adde Sp. Ligni Guaiaci optimè rectificati unc. ſemis. M.*

Theſe Medicins as well as the former, will cauſe plentiful and eaſy Evacuations, without weakning the Patient, or pauling the Appetit; and tho ſomtimes they work briskly, yet at the ſame time the Patient will gather ſtrength. Now according to the beſt of my Obſervations, all that is requir'd in the Cure of a Chronical Diſtemper, is to cauſe plentiful Evacuations, without weakning the Patient; which intention the foreſaid Medicins will ſeldom or never fail to anſwer: and I do not queſtion, but whoever ſhall think fit to try them, will find I ſay no more than truth.

If the Medicins given at the firſt beginning of a Fit do at any time make people go to ſtool too often, I then order them to drink freely of an Infuſion of Oak Bark, which greatly confirms the Tone of Animal Subſtances.

℞ *Cort. Querci ſiccat. & contuſ. unc. quatuor; Aq. Font. Tep. libras tres. Infunde per noctem, & coletur.*

Upon

Upon the going off of this Distemper, in people of a Cachectic habit of Body, a Course of *Calibeats* is very proper, and rarely fails doing good service; but before we begin with Calibeats, the Pains must be quite off. The Calibeat Course I generally prescribe, is as follows. But in all general Courses respect must be had to particular Constitutions; and according as they vary, so must our Prescriptions. But since it is impossible to adapt every thing to the many various Constitutions of men, that must be left to the Judgment and Experience of the Physician who is upon the spot; but generally speaking the following Course dos very well agree with most people.

℞ *Calibis cum Tart. præp. unc. semis; Castorei de Russiâ, Salis Succini, ana scrup. duos; Nucis Moscatæ, Cardamomi, ana dracm. unam; Conser. Salviæ unc. duas; Syrup. Garrioph. q. s. f. Elect. cap. quant. Nucis Moscatæ, primò manè & horâ quartâ pomeridianâ, superbibendo hausi. Infusionis sequentis.*

℞ *Cardamomi, Cubebarum, ana drac. duas; Cort. extern. Aurantior. drac. tres; Gentianæ dracm. unam; Flor. Centaurii pug. duos; Vini Rhenani veteris libras tres. Infunde clausè & calidè per horas sex, & coletur; Colatura reservetur ad usum.*

These

These Medicins must be taken for at least a month, or longer, as there may be occasion; but, as before observ'd, must not be taken till the Pains are quite off.

Instead of the foregoing Steel Course, especially to Women, I give that which follows, which opens their Obstructions, and reduces their Bodies to a good habit.

℞ *Calibis Nr. cum Sale Armoniaco præp. unc. semis; Myrrhæ Elect. dracm. tres; Ol. Nucis Moscatæ gut. xx. Extract. Gentianæ q. s. f. Massa; ex qua formentur Pil. magnitudinis Pisæ minoris, cap. N°. quatuor primò manè & horâ quartâ pomeridianâ, superbibendo haust. Infusionis sequentis.*

℞ *Fol. Persicariæ siccat. M. duos; Flor. Centauriæ P. duos; Cort. extern. Aurant. dracmas duas; Rad. Gentianæ drac. duas; Aq. Font. bullientis libras quatuor. Infunde clausè & calidè per horas quatuor, & coletur; Colatura reservetur ad usum.*

During the time that people are in either of the forementiond Steel Courses, it will be convenient they take a small Sweet-meat Spoonful of the *Elixir Sulphuris* [or else fifteen or twenty Drops of the *Elixir Vitrioli*] in the first Draught either at, or just before Dinner; and that they use such moderat Exercise as will warm

warm them, but not make 'em sweat. But of all Exercises, riding on Horseback is the very best, it putting the whole Body into motion without spending the Spirits. [Note, that when People are in a steel Course, if they find the least return of their Pains, they must immediatly leave it off, and have recourse to the *Cremor Tartari*, and *Tartarum Vitriolatum*, &c. and when the Pains are gon, then to the Steel again.]

To som people especially, if subject to Coughs, I prescribe for at least a Month, a Spoonful of the forementioned Tincture, made with *Gum Guaiaci* and Spanish Juice of Liquorish, to be taken first in the morning, and last at night in a Draught of the following Infusion, after the Distemper is perfectly gon off.

℞ *Rad. Eringii siccat. unc. duas; Enulæ Campan. unc. unam; Balsam. de Tolu drac. duas; Vini albi* ℔ *tres. Infunde clausè & calidè per horas sex, & coletur; Colatura reservetur ad usum.*

The Cure of Diseases depends upon Observation; and every Physician who expects success in his Practice, must nicely consider his Patient's Constitution, and give those Medicins that are most sutable to it. That Medicin which will cure the same Disease in one Constitution, may not do it in another. Up-

on

on which score I have bin obliged to vary my Prescriptions; not but that the general Basis of 'em all is the same, they being all Acids, but of different kinds, suted to the different Palats and Stomachs of my Patients: and there is not any one Part has a nicer sensation than the Stomach, as every days Observation makes appear. The Doses of the Medicins prescrib'd must be either lessen'd or augmented as there is occasion.

All people are not to expect a Cure in the same instant: I have known several times, that once application of the Balsam, without any internal Medicin at all, has perfectly taken off a violent Fit; when at other times, Fits that have not appeared to be near so violent, have bin a fortnight or three weeks before the Pain has quite gon, tho there has bin a constant and regular use both of external and internal Medicins. But tho the external Medicins will, without repelling, somtimes take off a Fit, without the use of any internal ones at all, yet I dare advise no one to rely upon them, but at the same time to use internal Medicins to strike at the Root of the Distemper; and after the Pain is quite gon, to prosecute the foregoing Directions.

This is all I think convenient to say upon this Subject at this time; and from what I have said, I believe I have given as clear hints, nay much clearer than ever were yet given con-

concerning the Cure of this troublesom Distemper, which has hitherto bin so vainly attempted.

The Medicins I have prescrib'd are but very few, and many of 'em very well known; but I am almost positive were never before prescrib'd in the manner I have don. There is nothing that will in the least put any force upon Nature, and therfore none need be afraid of trying the Efficacy of my new Method. Had I prescribed much and violent Purgings, Vomits, Bloodletting, and such Courses, wherein there was any great hazard and danger, people would have all the reason in the World to be cautious and fearful: But there is no such thing, there being no one Medicin that has not a tendency to confirm and strengthen the Tone of the Stomach, and of all the parts of the Body, to create an Appetit, and to excite Nature to throw off any load of exrementitious Matter that may chance to be lodged on any Part.

[I have bin as faithful in my relations as possible; and the Directions I give are such as I have found successful. And I thank God the first Edition of this Book has bin useful to many honest distressed Gentlemen; and I doubt not but this will have the same effect.]

CHAP.

CHAP. V.

FOR a farther clearing of the Truth of my Hypotheſis, I ſhall inſert two or three Caſes, and with them ſhall conclude this Treatiſe, which is already ſwel'd to too great a Bulk.

Caſe the Firſt.

A Perſon who for fourteen or fifteen years had bin moſt miſerably afflicted with the Stone in the Kidneys, and a general ill Habit of Body, was on the *4th* of *July* 96, ſeiz'd with the Gout in the Wriſt of his right hand, preſently afterwards in the Inſtep of his left Foot, then in the Inſtep and Toes of his right foot. When he ſent for me, being the *6th*, he was in the moſt intolerable Pain and Miſery in which it was poſſible for a poor Creature to be, and ſupport himſelf under it. I ordered him to drink Lemmonade for his conſtant Drink, and to take the following Pouders once in four hours in a draught of Watergruel.

℞ *Tart. Vitriolati dracm. tres; Cremor. Tartari unc. unam; Sacchari Alb. unc. unam. M.f. Pul. in quatuor chartulas diſtrib.*

And to apply the Balsam before mention'd to each affected Part night and morning, rubing it in with a warm Hand; then to apply a piece of thick white Paper, and upon that Flannel Cloths two or three double. The 7*th* it lodg'd it self in the right Knee, and in both his Hips: his Pains were most intolerable, and he so fixt to his Bed, that he could not stir or move Hand or Foot, or suffer the Clothes to touch him. At the same time he had a violent Fever, which seiz'd him at the beginning of his Illness; which was greatly increased by the violence of his Pain, his Tongue being extremely black and rough. I order'd the Balsam to be applied again to all the affected Parts, and likewise ordered him to take a small Sweatmeat Spoonful of the following Elixir (which is the *Elixir Sulphuris* so often mention'd before) in a Glass of White-wine when ever he was fainty, or complain'd of a sickness in his Stomach.

Elixir Sulphuris.

℞ *Olei Sulphuris per Campan. unc. duas; Spirit. Vini opt. rect. ℔ unam; Sacchari Cand. Alb. unc. duas; Garriophillorum, Maceris, ana dracm. sex. M. & digerantur in Matracio optimè clauso, in leni calore Arenæ, per dies decem; tunc decantetur Tinctura clara, quæ reservetur ad usum in Phiola optime clausa.*

By

By the way, this is as noble a Medicin in moſt feveriſh Diſtempers, and as good a Stomachic as moſt in the World. I have ſeveral times don wonders with it alone.

The 8*th* he continued in the ſame ſtate, but his Pains ſomwhat abated; ſo I order'd the repetition of his former Medicins.

The 9*th* he was ſeiz'd with a violent Looſneſs, but his Pains much abated. I repeated his former Medicins, only added to each Doſe of Pouder four drops of Oil of Cloves, and inſtead of Watergruel, to take it in a Spoonful of Balſamic Syrup, and drink after each Paper a draught of the following Infuſion.

℞ *Rad. Eringii ſiccat. unc. duas; Lig. Saſſafras drac. ſex; Aq. Font.* ℔ *tres. Infunde clausè & calidè per horas tres, & coletur; Colaturæ libris duabus adde Elix. Sulphuris drac. duas, Syrup. Balſam. unc. duas. M.*

The 10*th* his Pains had almoſt left him, and his Fever gon, but his Looſneſs continued, to which I did not ſee any cauſe to give a check at that time; ſo I repeated his Medicins as before.

The 11*th* his Pains were quite gon out of his Joints, but he had a very great deal of Pain in the bottom of his Back, and his Looſneſs continued. I then order'd him to leave off uſing the Balſam, not thinking fit to have it

applied to his Back (tho I have oftentimes applied it to that part with good success) supposing his Pain there might procede from his Loosness; but I order'd the repeating of the other Medicins.

The 12*th* his Loosness continued, but no returns of his Pains; and his Appetit, which before was lost, came to him. I order'd him to continue the use of his Pouders, and to take the Elixir as oft as he was fainty; and tho by reason of his Loosness he was somwhat fainty, yet I durst not put a sudden stop to it, for fear of the return of his Pains, but to check it by degrees, I order'd him to take the following Mixture last at night, and to drink a Draught of the Infusion two or three times a day.

℞ *Diascordii dracm. duas; Elix. Sulphuris dracm. semis; Vini albi uncias tres. M. f. Mixtura horâ somni assumend.*

℞ *Rad. Eringii siccat. unc. duas; Cort. quercus siccat. unc. duas; Aq. Font.* ℔ *tres. Infunde calidè per horas sex, & coletur; Colatura reservetur ad usum.*

The 13*th*, 14*th*, 15*th*, 16*th*, and 17*th*, he continued to take the Pouders and Elixir; the Mixture at night, and the Restringent Infusion. His Loosness gradually went off; and as that abated, so did the Pains in his Back. He eat with a good Appetit, and gather'd strength:

ſtrength: his conſtant Drink all this time, when thirſty, was either Lemmonade, or Barly water acidulated with Oil of Sulphur.

The 19*th*, inſtead of his former Pouders, I gave him the following ones with the Infuſion: I order'd the leaving off all other Medicins, except the *Elixir Sulphuris* before dinner, or if at any time he was fainty.

℞ *Lapidis Hæmatitis unc. ſemis; Cremor. Tart. unc. unam; Ol. Saſſafras gut.* 40. *M. f. Pul in quatuor chartulas diſtrib. cap. unam primò manè & horâ ſeptimâ veſperi, in Cochlear. Syrup. Balſam. ſuperbibendo hauſt. Infuſionis ſequentis.*

℞ *Rad. Bardanæ Sic. unc. quatuor; Baccar. Juniperi unc. tres; Sem. Bardanæ, Fraxini, ana dracm. tres; Lig. Saſſafras drac. ſex; Aq. Font. bul.* ℔ *quinque. Infunde clausè & calidè per horas ſex, & coletur; Colaturæ ſing.* ℔ *duabus, adde Syrup. Balſam. unc. duas, Elix. Sulphuris dracm. duas. M.*

Theſe things he continued to take for a month, with the deſired ſucceſs.

This was the moſt dreadful Fit of the Gout I ever ſaw, and was taken off in as little time; and had not the Medicins well ſuted with the Diſtemper, to have abated the violence of the raging Pain, I verily believe he had never got over it.

Case the Second.

About the beginning of *January* 95, I was sent for to a Gentlewoman, who of a twelve month had scarce bin free from the Gout in som part or other; and at certain times had very great Effusions of Blood from her Nose, which were not to be stop'd but with the greatest difficulty. She being somwhat free from Pain (tho very lame) at the time when I came to her, I order'd her to take the following Medicins, first in the morning, and last at night, to prevent the return of her Pain; and if at any time she was sensible of the least Pain in any part, immediatly to apply the Balsam, according to the former Directions.

℞ *Tart. Vitriolati unc. semis; Cremor. Tart. unc. unam; Sacchari Alb. dracm. sex. M. f. Pul. in octo chartulas distribuend. ex quibus cap.* 1. *primò manè & horâ decubitus in haust. Infusionis sequentis.*

℞ *Ligni Sassafras unc. unam; Aq. Font. bullientis* ℔ *duas. Infunde clausè & calidè per horam unam vel alteram, & coletur; Colatura reservetur ad usum.*

She has continued to take these things almost ever since, and has never had one Fit of her Distemper, nor a return of her Bleeding; she has

has two or three times had a little Pain, which has bin presently taken off by the use of the Balsam.

I could give a great many instances of this nature, wherin by the same Method I have stav'd off Fits from invading Persons at the times they were wont to do: As also of the taking off the most violent Pains, when people have had a Fit upon them, in a very short time. But in so doing, I should swell this Piece to too great a bulk, when it is already larger by much than I at first design'd it; therfore I shall conclude all with this Premonition.

That Person may be said to cure any Distemper, the greatest number of whose Patients recover: The failure in som few Cases is no argument of want of Skill. Every body knows that the *Cortex Peruvianus*, given at due seasons, and in proper quantities, will cure Agues; yet there are som few Agues that will elude the efficacy of it, tho given with never so much caution and circumspection: Yet for all that, the Cortex will still be accounted (as there is all the reason it should) the greatest and the most certain Specific ever publicly known in the Cure of Agues, by reason there are very few Agues but what are to be cur'd by it. There are som people, who upon the taking of *Opium* are certain to lie awake the whole Night following: Yet its failing to make som few people sleep, dos no

way hinder but that Physicians may prescribe Opium, or som Preparation of it, to their Patients when they want rest, by reason there are very few to whom it is given, that it will fail of making sleep when they stand in need of it, tho oppress and tormented with the greatest pain. The Method I have laid down for the Cure of the Gout may fail in som few persons, especially if not rightly and exactly follow'd: but for my own part I have not known it fail above two or three times; and those failures I have great reason to believe, were rather to be imputed to the Irregularity and Perverseness of the Patients, than the Insufficiency of the Medicins. Well, but suppose they should fail in som few people, must they therfore be laid aside? By the same reason the Cortex should be laid aside in Agues, and Opium for the making people sleep, because they somtimes fail of answering the end for which they were given. I don't question, but with due caution and circumspection the Method I have laid down will as certainly cure the Gout, as the *Cortex* an Ague, or *Opium* make people sleep; which, because they so rarely fail to answer those Intentions, they will always be depended on.

I was going to put a *Finis* to all, but cannot do it before I have taken notice of the great Misfortunes I labor under. I have made it the business of my Life rightly to understand the

the nature of the Juices of Human Bodies, both in their natural and morbid ſtate, and by that means to be capable of doing ſomthing more than other people. Certainty has bin what I have aim'd at; and it will appear to every unprejudiced perſon by what I have ſaid in the Introduction to this Piece, that the foundation on which I have built my Practice, is ſolid and ſubſtantial. But my Misfortune has hitherto bin, That if any Patient of mine has chanced to die, or any one has not bin cur'd of a Chronical Diſtemper by almoſt merely looking upon them, immediatly an Outcry has bin rais'd, That I know nothing, or that I have killed my Patient. Nay, it's com to that paſs now, that if I do but chance to look upon a Patient, tho I preſcribe nothing for them, if they die, notwithſtanding they were expiring before I ſaw them, preſently there's a Noiſe that I have kill'd them. I expect the ſame Treatment in this caſe. If any one ſhall try my Methods in the Cure of the Gout, and be not preſently freed from their Pains (as if Chronical Diſtempers were to be cured with a Charm, by merely looking on them) it will immediatly be ſpread abroad, that I am in the wrong, tho I have given ſuch plain Demonſtration that the Foundation on which I build my Practice, is right: and one inſtance of my Method's failing, tho there have bin never ſo many Irregularities committed, ſhall

do

do me more mischief, than a hundred substantial Cures will do me good. To this sort of Treatment I have bin so long used, that I have great reason to fear the same again hereafter. But let my Treatment be what it will, I will never leave off prosecuting the Cause of Truth, and doing good in my Generation to the utmost of my power,

SOM

SOM

Medicinal Obſervations

Concerning the

Cure of Fevers, &c.

By the means of *Acids.*

Obſervation the Firſt.

MAY the Fourth, 96. I was ſent for to a Gentlewoman of great worth; who for ſom months had bin ſubject to a Hectic Fever, with a continual Faintneſs, and a depreſſion of her Spirits. About the 24*th* of *April* ſhe was taken with a violent inflammatory Fever, which had ſom ſmall remiſſions; ſhe was treated by another Phyſician with *Cortex Peruvianus* and *Bezoardics* in extravagant quantities, and brought juſt to Death's door by 'em. She had frequently very violent Convulſions; and when they went off, a continual languor: ſhe was fainty and weak

weak to the last extremity, even so weak, that she could not turn her self in her Bed; and tho she had every night taken *Diacodium* largely, she had not slept for eight or ten days and nights, not so much as one hour, her Spirits being put into such a hurry and confusion. Her Physician had given her over for dead, and I was brought in only to look upon her, and see her expire. But seeing her Relations all in Tears, bewailing the great loss they were like to have, I told 'em there were still som sparks of hope, and that plentiful quantities of Acids might go near to retrieve her; upon which they immediatly beg'd me to try what might be don: so I prescribed her the following Medicins.

℞ *Tart. Vitriolati dracm. tres; Crem. Tart. unciam semis; Salis Succini drac. semis; Rad. Peoniæ dracm. unam; Castorei dracm. semis; Sacchari Alb. dracm. sex. M. f. Pul. in sex chartulas distrib. ex quibus cap. unam tertia quâque horâ in Cochlear. Julap. sequentis, superbibendo haust. ejusdem.*

℞ *Aq. Pulegii, Rutæ, ana unc. sex; Gas. Sulphuris unc. quatuor*; Aq. Hister.*

*[Note that *Gas Sulphuris* is a Medicin made of very different degrees in Strength; therfore the quantities prescribed must be greater or less, according as it is more less strong: and the most certain way of prescribing it is in such a quantity as may make the Vehicle in which it is given moderatly sharp.]

unc.

unc. quatuor; Castor. in Nod. includ. scrup. duos. M. f. Julap.

℞ *Sp. Lavendulæ, Gas. Sulphuris, ana uncias duas; Aq. Hister. uncias quatuor. M. f. Mixtura, cap. Cochlear. unum in Languoribus.*

The *Fifth* in the morning I visited her, and found her Symtoms greatly abated; she had had two or three stools, and slept about four hours. I order'd her to persist in the use of her former Medicins.

The *Sixth*, her Convulsions had quite left her, her Fever greatly abated, and she had slept tolerably well the precedent Night: I order'd her to persist in the use of her Medicins, as before, and to drink plentifully of the following Julap when thirsty; and to eat Lemmons and Oranges in as plentiful a manner as she pleased.

℞ *Aq. lactis Alexiter. libras duas; Cinnamomi fortis uncias duas; Syrup. Lujulæ unc. tres; Ol. Vitrioli Dul. q. s. ad moderatam aciditatem, cap. liberè & largos haustus.*

The *Seventh*, her Spirits were in a great measure com to her, and her Fever going off; but she was somwhat costive, which created a disorder in her Head: I therfore order'd the following Clyster, with the repetition of her former Medicins. ℞

℞ *Decoct. com. pro Clysteribus uncias duodecem; Elect. Lenitivi unc. unam; Syrup. Violar. unc. unam sem. Salis Com. pug. duos. M. f. Enema.*

The Clyster work'd very briskly, and therfore that night I gave her the following Draught.

℞ *Aq. Lactis unc. duas, Mirabilis dracm. tres; Gas. Sulphuris dracm. duas; Laud. liquid. gut. 20. Syr. Papaveris Rhœad. unc. sem. M. f. haust. horâ somni assumend.*

The *Eighth*, I found her greatly recover'd, and her Appetit began to com to her: I allowed her to eat any thing of easy digestion, and order'd the repetition of her Pouders and Julap, and Cephalic Mixture.

By the *Twelfth*, thro the foresaid Method, her Fever was quite gon. I then prescrib'd the following Purge to be repeated once in two or three days.

℞ *Rezinæ Jallap. gr. x. Crem. Tartari gr. xv. Antimonii Diaphoret. gr. xii. Conf. Cynosbati q. s. f. bolus cap. primò manè cum regimine.*

The Night following I order'd the following composing Draught.

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℞ *Aq. Lactis unc. duas, Mirab. unc. ſemis; Laud. Liquid. gut.* xx. *Ol. Sulphuris gut. v i. Syr. Papaveris Rhœad. unc. ſemis. M. f. hauſt. horâ ſomni aſſumend.*

She having for ſom time before this Ilneſs bin ſubject to Hiſterical Indiſpoſitions, I preſcrib'd the following Steel Courſe, to be continued for three weeks, or a month: But before ſhe enter'd upon it ſhe was perfectly well of her Fever, and went abroad.

℞ *Calibis cum Tart. præp. unc. ſem. Cardamomi, Cubebarum, ana dracm. unam; Salis Succini, Caſtorei, ana ſcrup unum; Conſ. ſalviæ unc. unam ſem. Syr. Peoniæ q. ſ. f. Elect. cap. quant. nucis moſcatæ primò manè & horâ quintâ pomeridianâ, ſuperbibendo unc. quatuor Vini medicati ſequentis.*

℞ *Cardamomi, Cubebarum, Galangæ, anæ dracm. duas; Gentianæ dracm. tres; Calibis cum Tart. præp. dracm. duas; Vini Rhenani veteris libras duas ſem. Infunde clausè & calidè per horas ſex, & coletur; Colatura reſervetur ad uſum.*

By the means of this Calibeat courſe ſhe was perfectly freed from her Hiſterical Indiſpoſition.

Obſer-

Observation the Second.

June the Sixteenth, I was sent for to a young Gentleman of a very gross habit of Body, who was seiz'd with a violent Fever, and upon the first attacks of the Distemper was convulsive and delirous, with violent Vomitings. I first of all order'd large quantities of *Carduus* Posset-drink to bring off that load of viscous Phlegm with which his Stomach was over-charg'd: about two or three hours after his Vomiting was over, I prescrib'd Blood-letting to twelve or fourteen Ounces, and that he should take the following Medicins.

℞ *Tart. Vitriolati dracm. unam; Cremor. Tartari, Salis Prunellæ, ana dracm. tres; Sacchari Albi unc. unam. M. f. Pul. in sex chartulas distrib. ex quibus cap. unam secundâ quâque horâ in Cochlear. Julap. sequentis, superbibendo haust. ejusdem.*

℞ *Aq. Lactis libram unam; Syrup. Lujulæ unc. unam; Ol. Vitrioli dul. q. s. ad moderatam aciditatem. M. f. Julapum.*

℞ *Aq. Hordei ℔ duas, Mirabilis uncias duas; Syr. de Rubo Idæo uncias tres; Ol. Sulphuris gut.* xxx. *M. f. Julap. cap. pro potu ordinario.*

The

The *Seventeenth* he continued much in the ſame ſtate, only his Convulſions abated, his Urin was crude and undigeſted, and he had two or three ſtools. I order'd the repetition of his former Medicins.

The *Eighteenth* his Convulſions were quite gon, but his Head and Face were mightily ſwel'd and inflam'd: His Vomitings had quite left him, but he continued looſe, to which I did not think fit to put a ſtop, by reaſon he was a Perſon of a very groſs Body. I ordered a large Veſicatory to be applied to his Neck, and that he ſhould perſiſt in the uſe of his former Medicins.

The *Nineteenth*, the ſwelling and inflammation of his Head and Face increaſed; he had a great difficulty in making Water, occaſioned by the application of the Veſicatory, and his Looſneſs ſtill continued. I preſcribed the following Medicins.

℞ *Sem. Quatuor. Frig. M. ana dracm. duas; Papaver. alb. unc. ſemis; Amygdal. dul. Decort. dracm. ſex; Aq. Hordei libras duas, f. Emulſio S. A. addendo Syr. Althææ unc. duas: cap. liberè & largos hauſtus.*

℞ *Cremor. Tartari, Salis Prunellæ, ana dracm. duas. Ol. Garriophillor. gut. octo; Sacchari Roſati unc. ſemis. M. f. Pul. in quatuor Chartulas diſtribuend. ex quibus cap. unam*

tertiâ quâque horâ, in cochleari Julap. sequentis, superbibendo hauſt. ejuſd.

℞ *Aq. Cinnamomi Hord. libram unam; Syr. Lujulæ unc. unam; Ol. Vitrioli dul. q. ſ. ad moderatam aciditatem. M. f. Julap.*

℞ *Aq. Cinnamomi, Mirabilis, ana unc. duas; Aq. totius Citri unc. quatuor; Ol. Sulphuris gut. decem; Syrup. Garrioph. unc. ſemis. M. f. Cardiacum cap. cochlear. quatuor vel quinque in languoribus.*

The *Twentieth*, his Head and Face were all over in one continued Bliſter; his Fever began to abate, his Looſneſs ſtopt, and his Urin tolerably well digeſted, but his Strangury continued. I order'd the repetition of his Emulſion, with the other Medicins.

The *Twenty firſt*, his Fever was in a manner totally gon, his Strangury quite left him, and the Urin he made of a very good color, with a ſettlement in the bottom; and from the Bliſters of his Head and Face were diſcharged large drops of an acrid Alkalious Liquor. I forgot to mention that the Serum of his Blood did turn a ſolution of Syrup of Violets from a blue into a very deep green Color, which was a plain indication that his Blood abounded with Alkalious Particles, and was the occaſion of the Febril Fermentation; to allay which I thought it abſolutely neceſſary

to

to prescribe a plentiful quantity of proper Acids, and from the beginning I directed him to eat as many Oranges and Lemmons as he pleased. I order'd the repetition of the former Medicins.

The *Twenty second*, his Fever was perfectly gon, and his Blisters almost fallen, he began to have an Appetit; upon which I allow'd him to eat som boil'd Chicken or Whiting. I ordered him the following Medicins.

℞ *Crem. Tartari, Salis Prunellæ, ana dracm. tres; Rad. Petasitidis siccat. & Pul. dracm. duas; Cochinillæ dracm. unam. M. f. Pul. in sex chart. distrib. ex quibus cap. unam quartâ quâque horâ in cochlear. Julap. sequentis, superbibendo haust. ejusdem.*

℞ *Aq. Lactis Alexiter. Vini Rub. Gal. ana* ℔ *unam; Syr. de Rubo Idæo unc. duas; Ol. Vitrioli dul. scrup. duos. M. f. Julap.*

By the *Twenty fourth* he was perfectly well, and went abroad. After he had recover'd his strength, I order'd the following Purge to be repeated two or three times, at about three days distance.

℞ *Cremor. Tart. gr.* xii. *Antimon. Diaphoret. gr.* x. *Rezin. Jallap. gr.* viii. *Conf. Cynosbati q. s. f. bolus, primò manè assumend. cum regimine.*

At night going to bed, after he had taken the Purge, I order'd the following quieting Draught.

℞ *Aq. Papaveris unc. duas, Mirabilis drac. tres; Ol. Sulphuris gut. octo; Laud. Liquidi gut.* xx. *Diacodii dracm. tres. M. f. hauſt.*

The neck of this Fever was perfectly broke in ſeven days, tho it was no leſs than what is commonly called Malignant. Wheras had he bin treated with Alkalies and Alexipharmics, it would have bin no leſs than fourteen days before his Fever would have any thing abated, if he had not dropt by the way. By this Method of mine People are generally kept from being delirous, and all thoſe other dreadful Symtoms that attend ſuch as are treated with Alkalies and Alexipharmics.

Obſervation the Third.

July the Eighth, I was ſent for to a Woman who had lain three days and nights in an Apoplectic Fit, in which time Dr. *Richard R.* had order'd her to be let blood to the vaſt quantity of ſix Ounces, and had cauſed a Veſicatory of the largeneſs of a Crown-piece to be applied to her Neck. From neither of which had ſhe found any relief; neither indeed could it be expected, it being but mere trifling in ſo deplorabl

plorable a Diſtemper. She had not ſpoke nor ſtir'd either Hand or Foot the whole three days, but lay as one dead. I immediatly order'd thirty Ounces of Blood to be taken out of her Arm, and large Veſicatories to be applied to her Head, her Neck, and her Wriſts; and that they ſhould force down the following Medicins: but in a little time after the Bleeding, her Senſes began to com to her.

℞ *Tart. Vitriolati dracm. unam; Cremor. Tartari dracm. duas; Reſinæ Jallapæ ſcrup. unum. M. f. Pul. in quatuor chartulas diſtribuend. ex quibus cap. unam ſecundâ quâque horâ, donec incipit purgare.*

℞ *Sp. Lavendulæ unc. duas; Gaſ. Sulphuris unc. unam; Aq. Peoniæ Comp. unc. tres. M. f. Mixtura, cap. cochleare unum frequenter.*

The *Ninth* ſhe continu'd ſtupid and dozy, ſo I order'd thirty Ounces of Blood to be taken from the Jugular. Her Pouders had not wrought with her, and therfore I order'd the following Cliſter, and likewiſe a Sternutatory to be uſed often, and a repetition of her Cephalic Mixture. For her conſtant Drink I ordered a Tea made of Roſemary and Lavender Flowers, to be acidulated with dulcified Oil of Vitriol.

℞ *Flor. Rorismarini, Lavendulæ, ana m. unum; Cort. Winteriani unc. semis; Aq. Font.* ℔ *duas: coquantur ad dimidiæ partis consumtionem, & coletur; Colaturæ unc.* xii. *adde Vini Benedicti unc. unam, Syr. E spinâ Cervinâ unc. unam semis. M. f. Enema statim injiciend.*

℞ *Castorei opt. drac. sem. Nucis Moscatæ dracm. unam; Fol. Assari dracm. semis, Nicotiani dracm. duas. M. f. Pul. sternutatorius frequenter usurpand.*

The Clyster wrought very well, and her Blisters run plentifully, which greatly reliev'd her.

The *Tenth*, she could turn her self in her bed, and open her Eyes, and swallow very well, but could not speak at all. So I order'd them to dip som tosted Bread in Spirit of Lavender, and that she should hold a piece of the said Bread in her mouth, and take the following Medicins.

℞ *Tart. Vitriolati dracm. duas; Cremor. Tart. unc. semis; Castorei, Salis succini, ana dracm. sem. Ol. Nucis moscat. gut.* xx. *M. f. Pul. in quatuor chartulas distribuend. ex quibus cap. unam quartâ quâque horâ in cochlear. Julap. sequentis, superbibendo haust. ejusdem.*

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℞ *Aq. Pulegii uncias duodecem; Pconiæ Comp. Hister. ana unc. duas; Sp. Lavendulæ, Gas. Sulphuris, ana unc. unam sem. Syr. Peoniæ unc. unam. M. f. Julap.*

The *Eleventh*, she could speak half words, but was somwhat stupid; so I order'd her to be let blood again in the Jugular to thirty Ounces, having found her to be greatly reliev'd after each of her former bleedings, and to perfist in the use of her former Medicins.

She was let blood no more, but continued to use the forementiond Medicins; and by the eighteenth she was able to speak freely, and to walk about her room: So I prescrib'd her the following Steel Course, and directed her to persist in it for about three weeks or a month, which accordingly she did, and she continues perfectly well.

℞ *Calibis cum Tart. præp. unc. semis; Nucis moscatæ, Cardamomi, ana dracm. duas; Castorei scrup. duos; Ol. Nucis moscatæ gut. xxx. Conf. Salviæ unc. unam sem. Syr. Peoniæ q. s. f. Elect. cap. quant. Nucis Moscatæ primò manè & horâ quartâ pomeridianâ, superbibendo uncias quatuor Infusionis sequentis.*

℞ *Flor. Rorismarini, Lavendulæ, ana M. un. Nucis moscatæ, Cardamomi, ana*

drac. duas; Aq. Font. libras duas. Infunde clausè & calidè per horas quatuor, & coletur; Colaturæ adde Sp. Lavendulæ unc. quatuor. M.

Observation the Fourth.

June the twenty fourth, a Gentlewoman applied her self to me for advice. She had a constant lassitude and wearinesse upon her, a violent Cough and Shortnesse of Breath, and constant soreness and pain in her Breast, a taste of Blood always in her Mouth, a Hectic Fever, and Cold, Colliquative Night-sweats, with an almost total loss of Appetit; all the true Signs of a radicated, confirm'd *Pthisis* or Consumtion. I prescribed the following Medicins.

℞ *Tartari Vitriolati dracm. unc. sem. Cremor. Tartari, Salis Prunellæ, ana dracm. duas; Sacchari Alb. dracm. sex. M. f. Pul. in octo chartulas distrib. ex quibus cap. unam quartâ quâque horâ, in haust. Infusionis sequentis.*

℞ *Rad. Eringii unc. duas; Balsf. Tolutani dracm. unam: Aq. Font. lib. duas semis. Infunde clausè & calidè per horas sex, & coletur; Colaturæ adde Syr. Balsam. unc. duas. M.*

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℞ *Gaſ. Sulphuris unc. duas; Ol. Cinnamomi, cum Sacch. alb. mixt. gut. quatuor. M. cap. cochlear. unum in omni difficultate reſpirationis.*

In about five or ſix days the bloody Taſte in her Mouth began to abate, as did alſo her Sweats.

July the Firſt I viſited her (ſhe being remote from the City, I could not viſit her above once a week) and finding her ſomwhat Hiſterical with a little Looſneſs, I preſcrib'd the following Medicins, and ordered her Pouders and Infuſion to be repeated.

℞ *Aq. Lactis Alex. unc. duas, Hiſter. drac. tres; Gaſ. Sulphuris dracm. duas; Ol. Cinnamomi gut. unam; Laud. Liquidi gut.* xx. *M. f. hauſt. horâ ſomni aſſumend.*

℞ *Aq. Lactis unc. octo, Hiſter. unc. quatuor, Cinnamomi Fort. unc. un. ſem. Gaſ. Sulphuris unc. unam; Syr. Balſam. unc. unam. M. f. Mixtura, cap. Cochlear. quatuor ſæpius in die durante languore.*

℞ *Gaſ. Sulphuris unc. quatuor; Ol. Cinnamomi, cum Sacch. alb. q. ſ. Mixt. gut. ſex. M. cap. cochlear. unum in omni hauſt. potus.*

Au-

August the first, her bloody Taste and cold Sweats had quite left her, and the Soreness of her Breast was much abated, and her Appetit in a manner restor'd. But her Cough and Shortness of Breath continued, as also did her Hectic Fever; but these were much more favorable than at the beginning. I prescribed the following Medicins.

Repetantur Pulveres & Infusio.

℞ *Ol. Vitrioli dul. dracm. duas. Cap. gut. 40. in omni haustulo potus, & præcipue quando difficultatem respirandi habet.*

℞ *Opobalsami dracm. duas. Cap. gut. sex sing. noct. horâ decubitus in cochlear. Syrup. sequentis.*

℞ *Syrup. Balsam. unc. quatuor, Ol. Sulphuris per campan. q. s. ad acid. saporem.*

August the *6th* her Cough and Shortness of Breath had quite left her, and all the other Symtoms in a manner abated; but she was very costive, and had a propensity to vomit; I therfore prescribed as follows.

℞ *Sp. Hier. Picræ scrup. duos; Tart. Vitriolati dracm. unam; Aq. Epidem. unc. tres.*

tres. M. f. Mixtura, cap. cochlear. unum primò mane, & cochlear. ſem. horâ dimidiâ ante prandium, in hauſtulo Vini rubri.

Auguſt the 12*th*, ſhe was ſomwhat Hiſterical, but had no return of her former Indiſpoſitions; ſo I preſcribed the following Medicins.

℞ *Aq. Pulegii Ceraſor. nig. Hiſter. Rutæ, ana unc. quatuor; Elix. Vitrioli ſcrup. duos; Sacchari alb. unc. unam. M. f. Julap. cap. cochlear. ſex in languoribus.*

℞ *Laud. Lig. ſcrup. unum; cap. gut.* XXV. *horâ decubitus in hauſt. Julap. præcedentis.*

Auguſt the 22*d* ſhe finding her ſelf very well, return'd to her own Habitation in the Country, a great diſtance from *London:* ſo I preſcribed the following Medicins to be taken for three weeks or a month, to confirm her in her Health, and prevent the return of her Diſtemper.

℞ *Cremor. Tartari, Salis prunellæ, ana unc. unam; Tart. Vitriolati dracm. decem; Maſtiches unc. ſemis; Sacchari alb. unc. quatuor; Ol. Garriophil. dracm. ſemis. M. f. Pul. in pixide aſſervand. cap. quant. Mucroni cultri contineri poteſt, in hauſt. Infuſionis bis in die.*

℞

℞ *Elix. Vitrioli unc. semis; cap. gut.* xv. *frequenter in haust. Infusionis.*

℞ *Opobalsami dracm. duas; cap. gut. sex sing. noct. horâ decubitus in cochlear. Syrup. Balsam. cum Ol. Sulph. acidulati.*

She has since bin in Town very well, and free from any of her former Indispositions.

Observation the Fifth.

October the 13*th*, I was sent for to a young Gentleman who for som days had bin ill of a Pestilential Fever, having black and purple Spots upon his Breast, and other parts; and about thirty hours before was taken with a violent bleeding at his Nose, and in that space had bled, by a modest computation, at least twelve pounds. All ordinary means, both internal and external, had in vain bin used by a great and honest Physician, whose Advice had bin requir'd; but the Effusion of Blood could no ways be stopt, so that both Physician and Relations had given him up for dead. But providentially a Relation of mine coming in, with a Solution of the *Vulnerary Pouder* that was formerly mine, soon stopt the Effusion of Blood at his nose, and withal gave 'em encouragement that if they would send for me, he might be so treated, as to have his Fever

ver taken off, and his Life preserv'd. Accordingly I was sent for; and tho the loss of Blood had bin so great, yet his Fever was not in the least abated, his Pulse being violently high and quick, his Tongue as black as a Coal, and so rough, that one might almost grate a Nutmeg upon it, with a violent Orgasm of his Spirits: both his bleeding, Spots, and even the Fever it self proceeding from the Globules of the Blood being broken by too great a quantity of Alkalies, as I have more at large taken notice in my Essay of *Alkaly and Acid.* I prescrib'd the following Medicins.

℞ *Crem. Tartari dracm. duas, Salis prunellæ dracm. duas, Tart. Vitriolati drac. unam, Sacchari rosati dracm. sex. M. f. Pul. in quatuor chartulas distrib. ex quibus cap. unam secundâ quâque horâ in parvâ quantitate Julap. sequentis, superbibendo haust. ejusd.*

℞ *Aq. Lactis Alexiter. Cinnamomi Hord. ana ℔ unam; Aceti distillati unc. duas; Syr. Lujulæ unc. tres; Ol. Vitrioli q. s. ad acidum saporem. M. f. Julap.*

℞ *Fol. Rosar. rub. m. sex, Aceti acerrimi q. s. coquantur ad mollitiem, & applicetur inter duas pannas lineas, fronti & stomacho.*

℞

℞ *Aq. Mirabilis, Cinnamomi, ana unc. tres; Cinnamomi Hord. unc. quatuor; Ol. Vitrioli gut. 60. Syr. Lujulæ dracm. sex. M. f. Cardiacum, cap. cochlear. sex quando Spiritus languent.*

Within half an hour after he had taken each of the first three papers of Pouder, he vomited up great quantities of coagulated Blood, but the fourth staid with him; and within three hours after he had two or three loose stools, the greatest part of which were Blood; after which he was somwhat composed, and slept three or four hours, and then seem'd to be much refresh'd.

October the 14*th*, I ordered a Repetition of the former Medicins; only instead of the Cordial, I gave him that which follows; and being very thirsty, I order'd he should have Lemmonade, with a little White-wine mixt with it, to drink in as plentiful a manner as he pleased.

℞ *Aq. Cinnamomi Hord. Cinnamomi Fort. ana unc. tres; Syr. Garrioph. dracm. sex; Confect. Alkermes dracm. duas. M.*

The 15*th*, the violence of his Fever began in som measure to abate, but he had a very great depression of his Spirits, being extremely

tremely fainty and weak. I order'd the following Pouders and Julap, with a repetition of his Cordial. And by reaſon he had not ſlept the foregoing night, I order'd the following compoſing *Hauſtus*, one half to be taken at eight a clock, the other half about Midnight, if he did not ſleep.

℞ *Tart. Vitriolati dracm. unam; Cremor. Tartari, Salis prunellæ, ana dracm. unam ſem. Ol. Cinnamomi gut. ſex, Garrioph. gut. ſex. M. f. Pul. in ſex chartulas diſtrib. ex quibus cap. unam ſecundâ vel tertiâ quâque horâ in cochlear. Syr. Balſam. ſuperbibendo hauſt. Julap. ſequentis.*

℞ *Aq. Cinnamomi Hord. libram unam ſemis, Mirab. unc. tres; Ol. Vitrioli dul. q. ſ. ad moderat. acid. addendo Syr. Lujulæ unc. duas. M. f. Julap.*

℞ *Aq. Cinnamomi Hord. unc. tres, Mirabilis dracm. ſex; Laud. Liquidi gut.* 30. *Ol. Vitrioli dul. gut.* 10. *Syr. Papaveris unc. ſemis. M.*

The 16*th* his Fever was more abated, and the Spots began to diſappear. But the blackneſs and roughneſs of his Tongue continued, and he was very coſtive; ſo I preſcrib'd the following Mixture to moiſten his Mouth, and the Cliſter to open his Body. The Clyſter wrought three or four times, and brought away

way a great quantity of black, coagulated Blood that still remained in his Bowels. After the operation of the Clyster, I ordered he should take the composing *Haustus* as before.

℞ *Urinæ Hominis sani unc. decem; Terebinth. Veneti cum Vitello Ovi opt. mixt. unc. unam; Ol. Chamomillæ unc. unam, Annisi gut. sex. M. f. Enema statim injiciend.*

℞ *Syr. Balsam. Aceti, ana unc. unam semis. M. f. Mixtura cap. cochlear. unum frequenter.*

Repetatur haust. Paregor. cap. dimidia pars post operationem Enematis, pars altera circiter medium noctis.

The 17*th*, the Spots totally disappear'd, and his Fever abated, but he continued very languid and fainty: I prescrib'd the following Medicins.

℞ *Cremor. Tartari, Salis Prunellæ, ana dracm. unam; Ol. Garriophillor. gut. octo, Cinnamomi gut. quatuor. M. f. Pul. in quatuor chartulas distribuend. ex quibus cap. unam tertiâ quâque horâ in Cochleari Syrup. Balsam. superbibendo haust. Julap. sequentis.*

℞ *Aq. Cinnamomi Hord. ℔ unam, Epidem. unc. quatuor; Syrup. Lujulæ unc. unam semis;*

semis; Ol. Vitrioli dul. q. s. ad moderat. Aciditatem. M. f. Julap.

Repetatur Julap. Cardiacum.

The 18*th* his Fever was in a manner gon, and he began to have an Appetit; so I allowed him to eat Whiting, or som such thing; the roughness and blackness of his Tongue were quite gon, but both his Mouth and Tongue were very sore; he also had a little obstruction in making Water. I prescrib'd the following Medicins.

Repetantur Pul. & Julap. hestern. nocte præscript. Repetatur etiam Enema non ita pridem præscript.

℞ *Sem. Cydonior. Dracm. unam semis; Aq. Fontan. lib. unam; coquantur ad dimidiæ partis consumt. & coletur; Colaturæ adde Syrup. Altheæ unc. unam. M. f. Gargarisma, frequenter usurpand.*

℞ *Amygd. Dul. decort. dracm. sex; Sem. Papaver. Alb. dracm. tres. Sem. Quat. Frig. M. ana dracm. unam; Aq. Rosarum unc. duas, Hordei lib. duas; F. Emulsio S. A. addendo Sacchari alb. unc. duas. M. cap. haust. larg. frequenter.*

The 19*th*, his Fever was quite gon, but the soreness of his Mouth and Tongue continued,

as did also his difficulty of making Water, but that was somwhat better than the day before. I prescrib'd for him as follows.

Repetatur Emulsio.

℞ *Sem. Psillii, Cydoniorum, ana dracm. unc. sem. Aq. Font.* ℔ *unam; coquantur ad dimidiæ partis consumt. & coletur; Colaturæ adde Syr. Altheæ unc. unam, Sacchari Saturni scrup. unum. M. f. Gargarisma, frequenter usurpand.*

℞ *Cremor. Tart. dracm. duas; Cochinillæ scrup. duos; Ol. Cinnamomi gut. quatuor. M. f. Pul. in quatuor chart. distrib. ex quibus cap. unam quartâ quâque horâ in cochlear. Syrup. Balsam. superbibendo haust. Julap. non ita pridem præscript.*

℞ *Aq. Lactis unc. unam semis, Mirabilis unc. semis; Laud. Liquidi gut.* xx. *Ol. Vitrioli dul. gut. decem. M. f. haust. cap. hac nocte, si non bene dormit.*

The 20*th*, his Appetit increased, and what he eat he digested very well; he began also to recover his strength, and could sit up an hour at a time. I order'd the repetition of his former Medicins.

The 24*th*, I visited him again, when I found him increased in strength to a very great degree. I order'd the following Medicins. ℞

℞ *Crem. Tartari dracm. duas, Cochinillæ dracm. unam. M. f. Pul. in quatuor chartulas distrib. ex quibus cap. unam primò manè & horâ octavâ vesperi, in cochlear. Syrup. Balsam. superbibendo haust. Julap. sequentis.*

℞ *Aq. Cinnamomi Hord. lib. unam, Epidem. unc. quatuor; Syr. Lujulæ unc. unam sem. Ol. Vitrioli dul. q. s. ad moderat. acidit. tem. M. f. Julap.*

He persisted in the use of these Medicins till the first of *November*, at which time I prescribed the following Steel Course, to be continued for a fortnight or three weeks.

℞ *Calibis cum Tart. præp. Crem. Tartari, ana dracm. tres; Cardamomi, Cubebar. ana dracm. unam; Conf. Salviæ unc. unam sem. Syr. Garriophillor. q. s. f. Electuarium, cap. quant. nucis moscatæ primò manè & horâ quartâ pomeridianâ, superbibendo haust. Infusionis sequentis.*

℞ *Rad. Eringii unc. duas; Cort. Aurant. dracm. tres; Aq. Font. ℔ unam sem. Vini rubri ℔ unam. Infunde per horas sex, & coletur; Colaturæ adde Syr. Aurantior. unc. duas. M.*

℞ *Rad. consolidæ majoris, Eringii, ana unc. duas; Aq. Font. ℔ quatuor; coquantur,*

ad dimidiæ partis consumtionem, & coletur; colaturæ adde Syr. Aurant. unc. duas. M. f. Apozema, cap. hauſt. ſæpius in die.

Before he began the Steel Courſe, he was very hearty and well; and the only reaſon of my putting him into the Steel Courſe, was to prevent his falling into a Dropſy, or ſom other Chronical Diſtemper, after the loſs of ſo great a quantity of Blood, attended with ſo violent a Fever: and I thank God it had the deſired effect.

From the recovery of this young Gentleman may ſeveral things be inferred: As,

Firſt, That *Hemorrhagies* in malignant, peſtilential Fevers, are not always to be accounted the certain Prognoſtics of future Death, nay, would very rarely prove ſo, were proper Acids given in plentiful quantities.

Secondly, That the worthy Gentleman, who is the great Patron of *Phlebotomy*, dos only follow Nature's Dictates, when he preſcribes Bloodletting in malignant Fevers.

Thirdly, That Malignant, Peſtilential Fevers may ſafely and certainly be cur'd without the uſe of any of the nauſeous Tribe of *Alexipharmics*, which very rarely are of any other uſe, than to ſend the Patient to his long home in a ſhort time.

The

The True Account of an Extraordinary Cure wrought by Bathing in Cold Water, sent to me by my Worthy Friend Dr. *Baynard*, from the *Bath*.

The Case of Samuel Crew *Gent. of* Lacock *in the County of* Wilts, *taken before* Edward Montague *of* Lacham, *Esq; and several other Gentlemen, then at his House present, all which very well knew his Condition, being of the Neighborhood.*

I The said *Samuel Crew*, about two years since, was seiz'd with a most intolerable Pain in my right Elbow, from thence the Pain went into the Insteps of both Feet, thence into my other Arm, and the lower end of my Back-bone; thence into the Nape of my Neck: But after it had seiz'd my Neck, it

spread all over me, not only in my Joints, but Flesh also, insomuch that the Calf of my Leg was contracted as hard as any Iron Wedg, and so continued three quarters of a year with such racking Pains as are inexpressible. My Belly seem'd to be clove to my Back-bone, insomuch that it was all hollow like a Dish, and would hold water when I lay upon my Back. My Fundament was drawn up three or four inches into my Body; and I was grown so thin and extreme poor, that I was raw, and gall'd with lying, and lousy with poverty of Flesh; and had such Pains in my Ears, that if a red hot Iron had bin run into them, they could not have bin worse. I lay upon my Back half a year, not being able to stir or move hand or foot all that time: In short, the Pain did so distract me, that I hallow'd and hoop'd like a madman with extremity of misery, insomuch that I really thought Hell could not be worse; nor is it possible for any Tongue to tell, or Pen to write the Miseries I endured. I was worn to a mere Skeleton; and when I went to stool, which was once in four or five days, and then forced by Purging Syrups, *&c.* no Woman in extreme Labor could have more pain, caused thro the contraction of my Fundament. I had several able Physicians with me, to whom my Case is well known; they prescribed me Purging, Bleeding much, and very often; they sweat me a whole month together. I

took

took *Viper Pouders, Crabs Eys, Pearl Cordials, Sal Volatil, Spirit of Sal Armoniac, Spirit of Harts-horn, Oil of Tartar,* and several other Drops, and all the *Waod-Drinks,* and all to no purpose: I went to the *Bath,* and there bathed, which so increas'd my Pains, that I am well satisfied, one Essay more in the *Bath* would have cost me my Life, even in the Waters. At last meeting with Dr. *Baynard,* he persuaded me to go into Cold Water over head and ears, every day fasting, and use the Decoction of *Wild Sage, Ground Ivy, Ground Pine, Germander* and *White Hoar hound,* acidulated with Crab-Verjuice, for my constant Drink, which I did; and in six days immersion in the Water, and using the Drink, I was well, so well as to walk about my Grounds: all my Pains insensibly vanish'd; my Stomach, which was quite lost and decayed, was restored; I got strength, slept sound, my Flesh came on, and my Color came into my Face. All this is well known to the Neighborhood and Country around, which with my humble Acknowledgments to Almighty God for this my great Cure, I attest to be literally true.

Given at Mr. *Montague's* House at *Lacham, June* 2. 1696.

Witness my Hand,

Samuel Crew.

[There is of late a cold Spring found out in the Fields at the end of *Greys-Inn Lane*, over which there is a House erected, and in all respects much greater conveniences than are to be met with either at the cold Baths at *St. Mongus* in *Yorkshire*, or St. *Winifred*'s in *Wales*; and the Water is in all respects as cold as either of them. Now the wonderful usefulness of Cold Waters in most Paralitic Distempers, and som Cutaneous ones, is such, that I am not ashamed to recommend them to the World.]

The

The Postscript of a Letter from Mr. William Matthews *Apothecary of* Ledbury *in* Herefordshire.

HAVING Time and Paper, I acquaint you with an Observation I have made of a Specific generally used here by the common people for the cure and prevention of the Small-Pox, which is, to drink frequently *Raddle*, *Terra Rubrica* (a thing known to every body in that Country) I think *English Bole*; it either prevents the Infection, or they that have it, very few and favorable: none die that use it.

A Child about a year old was taken violently with Convulsive Fits, and despaired of by Physicians: The Assistants were advised to apply young Pigeons, the Breeches to the *Anus*, till they lived; if the first lived, it was a sign they would do no good: Seven were applied one after another as fast as they died, which was immediatly in less than half a minute; the eighth lived, and the Child recover'd immediatly, and had no more Fits. The like I experimented upon a Neighbor's Child, but we could get but three, which all died; yet the Child recover'd very well. Afterwards being sent for to a Woman who complained of a convulsive Pain in her Side, and had bin near three weeks in that Condition, and gon thro

thro several Methods, *Cathartics*, *Opiats*, &c. to no purpose, I advised the Pigeons; ten or eleven died, the twelfth lived, and the Woman well recovered: she was emaciated with her Pains to a mere Skeleton, and Death in her Face, but is now healthy and plump.

But since, a Man troubled with Convulsive Motions, somtimes in the *Colon*, somtimes in the *Sphincter* Muscle of the Bladder, somtimes in the Hands and Feet; the Pigeons were applied, but had no effect; for tho several were applied, not one died, or was the worse for it.

To the Child before-mentioned they died so quickly, that a Gentlewoman present feared the Maid that applied them might hold them too hard, which might occasion their dying so suddenly; therfore she would her self apply them, and she did it with the greatest tenderness imaginable; yet as soon as fixt to the place, they sprawl'd out their Legs and died.

There is scarce any one that has bin long a Practitioner, who has not made som Observations of the operations of Specific Medicins. Now whoever has made any Observations of this nature, if they will be so kind as to communicat them to me, they shall not fail of being made public for the common benefit of Mankind; with the Names of the Persons who shall communicat them.

Just

Just as the last Sheet was in the Press, I received the following Letter from an unknown Hand; and having received many of the same nature, I have presumed to publish this, and to make som short Animadversions upon it.

Worthy Sir,

EXCUSE this Trouble from a Stranger, whose unhappiness it is to live so remote, as not to be capable to have the Honor of visiting and conversing with you: Yet permit me to tell you, that I have applied my self to the study of Physic divers years past, but have never yet prescribed any, unless in Charity to a few *Paupers*. Sir, I have read both your Books of *Alkalies* and *Acids*, I have read them over and over again; also I have your *Novum Lumen Chirurgicum*. I confess they seem to be very ingeniously wrote, and (as you declare) for the benefit of Mankind; and that I easily believe, because you are so free and liberal in printing your Receits. When you prescribe Acids in the Gout, Consumtion, *&c.* I am at a stand in my Study, and know not what Book to read next, since your new Doctrin contradicts all I have yet read in Physic. I did then make it my business to inquire of the Learned Men of my Acquaintance, what was your

your Education, and what their opinion of your Positions in your Books. The Physicians I have met with, tell me you were bred an Apothecary (as I think you say in one of your Books) and they will allow you to be a very good one. They will allow also, that you have got out of the Fire, by your assiduous Labor, an excellent Medicin to cure Wounds; but they admire extremely (considering your Youth and small time of Practice) that you are so positive and dogmatical in your Writings about Physic, since you contradict the Practice of so many eminent and worthy Physicians of the former, and this present Age, who will no more admit of Novelties in Physic, than Divines will in Religion. I told them I should be glad to see an Answer to your Books by som able Physician; to which they replied, you were not yet run to the length of your Line, for you are now about a Treatise of the *Gout*, of the different Species of those Attacks, and proper Medicins to cure each of them; in which presumptuous Undertaking you will so far expose your weakness, that after the publication therof, all your Books shall be answered and refelled together. Sir, I heartily wish they may be deceived in their expectation, and that you may not be deceived in yours. I humbly advise you to publish none of your Receits with your Treatise of the Gont; for if it shall happen that they answer not what you promise for them, you will expose your

self

self to the Censure of your Adversaries: Whilst on the other hand, if they shall prove as effectual as you expect, it is great reason that you should reap the sole benefit therof to your self, (during Life at least) and you may leave them after your Decease, a good Portion to your Son, or Jointure to your Widow. Nor think this Counsel too mean for your generous Soul, since divers eminent Physicians pretend to *Nostrums* of their own Invention, and conceal the Receits, and keep the Profits thence arising to themselves. The Surgeons I have conversed with, touching your Pouder and Tincture, for the cure of External and Internal Wounds, seem to be of a more angry and rigid Temper; they admire you should enter into their Province, and meddle in their Profession, which is but collateral, if not quite forein to your Education. I have made them confess that your Syringe is better than their Probes, and that it will reach farther, and with less danger to the Patient. They have confest also that you are in the right as to your prohibition of the use of Tents, since they keep the Wound open, and procrastinat Cures, rather than expedite them; but they will not allow that your external Medicin will cure any thing but cut Fingers and gall'd Horses; and that your internal Medicin is good only for the Gripes, and to procure rest. They confess you have cured som few Cuts with a Sword in four days, but they were such as a Dog would have

have lick'd whole in three: but a Wound made with a Gun-shot you never made any application to, or pretended to cure it. They indeed say, that in the Year Ninety Four you did dedicate a Book to the King, extolling the wonderful Cures effected by your Medicins in *Flanders*: but they admire at your Confidence, since few of those Cures were ever perfected; and if any of them were made, they were made by the Surgeons of the respective Regiments. They say farther, That you have never given any one Instance of any Cures wrought at the famous Siege of *Namur*, tho you were present all the time.

Sir, These Reports they have industriously spread abroad; whether true or false I know not: but I desire you will take it kindly from me, to acquaint you with what is said, which I presume was never said to your face, nor can you com to the knowlege therof any other way. I confess their Discourse seemed to be seasoned with the Salt of *Demetrius* and his Followers, who made Shrines for the Goddess *Diana*; wherfore I will suspend my Judgment, and also my farther study in Physic, till I see your Discourse of the Gout, which with impatience is expected,

Dated at York, Nov.30. 1696.

By your unknown, yet faithful Servant and Welwisher,

T. S.

The

The Gentleman who wrote me this Letter (whoſe Name I ſhould be glad to know) ſeems to be a man of Candor and Ingenuity. And I muſt confeſs, that the Doctrin I have advanced is ſo directly contrary to every thing that has bin yet wrote, that it is enough to ſtartle any young Man, nay ſom old ones too: But for all that, the Novelty of the thing is no argument why I ſhould not inculcat it in the cleareſt manner I can. The *Circulation of the Blood* thro the Arteries and Veins of Human Bodies, was as old as *Adam*, yet we don't find it ever clearly demonſtrated by any one before our Great *Harvy*'s time. And becauſe no man had wrote upon that Subject before, (nay the Opinions of all Mankind were directly oppoſit to it, tho it were as demonſtrable and clear, as that two and two make four; nay I admire how people could be ſo ſottiſh, as to ſee Blood run from a Vein below the Ligature, and not from thence infer a Circulation) muſt he therfore omit it for fear of diſpleaſing the reſt of his Brethren? If ingenious men ſhould take ſuch a courſe, we muſt never expect Improvements in any Profeſſion. But there never yet was any one that advanced a new thing, tho never ſo clear and demonſtrable, but all the reſt of his Profeſſion were up in Arms againſt him. It is an innat Principle in the minds of moſt men, not to allow any man to be more knowing in his Profeſſion than him-

himself. Every man almost would have the World believe, that he knows as much or more in his own Profession than any besides. But if a Person starts up, and advances somthing in a Profession that was not known before, he is immediatly cried out upon for an Innovator at least, if not for a Madman. This was *Harvy*'s Case; very few in his time believing, or at least owning the Circulation of the Blood, tho it be now the common received Opinion of almost all Mankind. *Harvy* inculcated his Doctrin so clearly, that 'tis almost impossible any Physician should be unconvinced of its truth: But they were then ashamed to own it, for fear people should see they were subject to Mistakes as well as other men; and if they were mistaken in so great a Point as the Circulation of the Blood, why not in others as much material? Physic is not brought to its *Acme* of Perfection. There are a great many Distempers we can't tell how to cure with any sort of certainty; therfore that Man who has made any Discoveries which may tend to relieve men in distress, is worse than a Brute, if he dos not communicat them, let his Treatment for so doing be never so ill. And to those who believe the Sacred Writings, it is one of the greatest comforts to be evilly treated for well doing, by reason that such are accounted Blessed.

As for my being bred an Apothecary, I am not ashamed to own it, as the greatest Lawyers

ers are not ashamed of their being bred Attornies. And many of the greatest of them have bin so.

As for the great Threats that are daily thundred out, of my being confuted; they are but mere Scarecrows to me. I am so far from being afraid of it, that I should be heartily glad to see it don: For whoever shall by solid and substantial Experiments make it appear that I am in the wrong, shall be my great *Apollo*; and the first thing I do, shall be to write a public Recantation. [But as for those many Tracts which have hitherto bin wrote against me, both before and since the first publication of this Treatise, if I may be allowed to judg in my own Cause, I can't forbear saying, that I think the Authors have more shewn their skill in Raillery and *Billingsgate* Language, than in strength of Argument to overthrow my *Hypothesis*; and where ill Language is used in the place of Arguments, it is enough to give judicious men a suspicion, that the Cause which wants to be supported by such Methods is not the best.]

The concealing of any thing I know, that may be any ways serviceable to Mankind, is what for the future I shall never do. I had better have given five hundred Pounds than have kept my Vulnerary Pouder and Tincture as Secrets; and had it not bin for making my self som part of satisfaction for the great Losses I sustained by going to *Flanders*, I

would never have sold them, but made them publick.

As for what som of the Surgeons continue to say of me, I am not in the least concern'd; but Justice to the Gentleman who bought the Vulnerary Pouder and Tincture of me, with the Receit for making the same, obliges me to assert that they will do more than cure the Gripes and cut Fingers. And since they say I have given no Instance of any Cure wrought at the famous Siege of *Namur*, I shall here presume to give an account of one, wherby their Positions will be totally overthrown.

One Mr. *Cherry*, a Serjeant of Grenadiers, in the Regiment of the Honorable Col. *Frederick Hamilton*, was, at the Attack of the *Terra Nova* of the Castle of *Namur*, wounded in twenty six places; twenty three of them were made with Bullets, and three large Cuts in his Head with a Sword. He lay forty eight hours stript naked upon the Breach, without a bit of Bread or drop of Drink, or having any thing don to his Wounds. Upon the Capitulation several of our Soldiers going up to the Breach to look after their dead Officers, found him alive; so they brought him down to me to the Hospital at the Abby of *Salsine*; he was as cold as a dead Corps, and so weak that he could scarce speak. There were two Bullets that went thro his Body, in just below the short Ribs on one side, and out on the other. He had seven Shots in his left Arm, the

Bone

Bone being broken and shatter'd to pieces, at least three Inches of it taken quite away: To be short, there was scarce one Limb that was not wounded more or less; and yet this Man was cured without applying any thing in the world to his Wounds but the Vulnerary Pouder, and giving him the Tincture inwardly; and thro the whole course of his Cure he had never any thing of a Fever. The truth of this will be attested by Mr. *Thomas Davis* Surgeon, in *Norfolk-street*, who had the care of him.

If any will enquire of the Honorable Colonel *Ingoldsby*, I am sure he will give them an account of a great many Soldiers of his Regiment that were wounded at the same time, who were cured by the same Means, as were a great many in other Regiments.

I have lately had an Account of a Country Surgeon who cut a Person for the Stone, and by means of the Vulnerary Pouder cured the Wound in four days.

As for what I have said in that Piece I dedicated to his Majesty, it is not in the power of the most malicious of my Enemies to contradict the Truth of any one of the Relations there given. But for what is said concerning the Regimental Surgeons, there is somwhat of truth in that; all, or the greatest part of what was don that Year, being perform'd by Mr. *Cholmly* Surgeon to the Honorable Col. *Brewers* Regiment, by my direction, I never

pretending to operat in Surgery my self, unless upon som very urgent Occasions, where a professed Surgeon was not to be had.

[There are a great many People in *London* and other parts of *England*, who confidently sell a Pouder and Tincture, which they call mine: But those People who buy them of any one besides Mr. *Brown* Bookseller without *Temple-Bar*, and Mr. *Raddison* in *Rupert-street* at the end of *Piccadilly*, if they find their expectations not answerd in the use of them, must not blame me, but themselves for being imposed upon, by reason I have 2 or 3 times before given notice that the true Medicins, which I will own and stand by, are only to be had of the foresaid Mr. *Brown* and Mr. *Raddison*.]

While I was writing this, by chance I met with the following Passage in *Juncken*, in his *Med. Præsenti seculo accommod.* pag. 250. and he being a Man who all along accounts for the Cause of Diseases from the Blood's abounding with too great a quantity of Acids, the thing seems to be the more strange, and is the more to be depended on.

Sal in genere à rerum Conditore infinitis bonitatibus dotatum est: Fermentationem juvat, alimenta digerit, putredinem arcet, appetitum excitat, terram fœcundat; hinc Maritimi populi terram sale impregnatam effodiunt, & agris inspergunt, & omne hoc acidi ratione: Ubi è contra Alkalia carnem mortificant, & putredinem

nem promovent; *& nisi horum ferociam eluderet acidus salis spiritus, mox omnia corrumperentur.*

Who could have desired more than this from a Friend? But coming from an Enemy, it carries the more weight and force along with it.

And thus I shall conclude, leaving this Piece to stand or fall as it deserves. If Mankind receives any advantage by it, I have my end. The Critics I am sure will carp at it, being wrote in so homely a Stile; but I have not aimed to tickle mens Fancies, but to inform their Judgments, and undeceive them in a matter of the greatest consequence.

The Gentleman who wrote me the following Letter, but a month before rail'd at my Doctrin of *Acids* the most that could be; tho I am sure he did it on no other score than because he thought my Hypothesis to be erroneous.

Dignissime,

CONtra Justitiæ Morumque normam peccarem, si virum cui Deo proximo vitam debeam, silentio præterirem. Nuper enim cum è luce penè evasissem, tu mihi propitiùs adstetisti, candide effulsisti, Tu meus Apollo. Ut autem quanto laboravi periculo, quam vix ac ne vix mortem effugi, Certus scies, & Morbi Naturam & Methodum Therapeueticam, seu Thanatephoram potiùs, paucis hic dicam. Hebdomada est, & ea quæ excurrit,

rit, quâ lethali quodam frigore correptus Ventriculus, officio fungi respuebat: Abhinc vires labefactare, animus delinquere, donec tandem Lipothymiam passus procubui. Iterum verò revertente animo, dum causam meditor tanti mihi mali, eccè adventabat fortè tunc Medicus, Doctus meherculè, & mihi familiaris: Is uti sanguinis Dyscrasin ob Acidi plus nimio oriri censebat; Volatilia & Alkalia omnia ad motum, & calorem excusitandum jubebat; igitur Sp. Sal. Arm. Sal. C. C. Vol. Vinum ustum, & similia, nocte dieque ingerebam: Vesicatoria insuper perquam ampla, & Enemata corroborantia continuò applicantur; frustrà tamen omnia, nec enim motum excitabant, nec colorem; at Sudores immodici, & frigidi, Membrorum rigor, Cordis palpitatio, & Pulsûs subinde intermissio subitam intentabant mortem. Animo mecum verò revolvente, quæ & aliàs expertus sum, & quæ ipse nuperrimè de Acidis scriptis mandâsti, Aquæ fontanæ parùm acidulatæ libram unam, deinde alteram, exhauriebam; cui horæ parte minus quartâ, & Membrorum debitus Calor, & benigna ubique transpiratio, successit: tunc arteriarum fortis micatio, alvi facilis exoneratio. Hoc temporis momento, tam subita mutatio, me ad Consilium vestrum petendum appulit; ex quo in melius cessi, Vires continuò recuperavi, vixi. His consona omninò Baynardus quidam, M. D. Facultate suâ inter Notissimos, qui ægritudinis sub initio mihi etiam adfuit, suasit; at Consilium ejus neglexi, heu quantum neglexi Consilium! Hoc enim orbi attestari

testari non erubescerem me nempe Acidi solùm beneficio, ab ipso mortis articulo eripi. Tantum non Jugulatis armatæ Medicinæ! Hìc habes studiosissime statùs nostri relationem, quæ pro viribus licèt imbecillis tamen animo quam forti, & non ingrato conscripta; ab

Amico tuo Fideli,

& Servo obedientissimo,

Dec. 19. 1696. N. Tyrling.

FINIS.

Newly publish'd.

AN Account of the first Voyages and Discoveries made by the *Spaniards* in *America*. Containing the most exact Relation hitherto publish'd, of their unparallel'd Cruelties on the *Indians*, in the destruction of above 40 Millions of People. Together with the Propositions offered to the King of *Spain* to prevent the further Ruin of the *West-Indies*. By *Don Bartholomew de las Casas*, Bishop of *Chiapa*, who was an Eye witness of their Cruelties. Illustrated with Cuts. To which is added, *The Art of Travelling*, shewing how a Man may dispose his Travels to the best advantage. *London*, Printed for *Daniel Brown* at the Black Swan and Bible without *Temple-Bar*, and *Andr. Bell* at the Cross-keys and Bible in *Cornhil*. 1699.

THE DOCTRIN of ACIDS IN THE Cure of Diſeaſes Further Aſſerted:

Being an *Anſwer* to ſome Objections rais'd againſt it by Dr. F. TUTHILL of *Dorcheſter*.

In which are contain'd ſome things relating to the *Hiſtory of Blood*: As alſo an Attempt to prove what *Life* is, and that it is principally ſupported by *Acid* and *Sulphur*.

To which is added an exact *Account* of the *Caſe* of *Edmund Turner* Eſq; deceaſed; as alſo the *Caſe* of another Gentleman now living, exactly parallel with Mr. *Turner*'s.

By JOHN COLBATCH, *a Member of the College of Phyſicians*, London.

The Second Edition Inlarg'd.

LONDON,
Printed for *D. Brown* without *Temple-Bar*; and *A. Roper* in *Fleet-ſtreet*. 1699.

The PREFACE.

THE *Hypotheſis I have advanc'd being new, and contrary to the common receiv'd Opinions of other Phyſicians, a very few excepted, I am continually peſter'd with Objections of one kind or other; and therfore to ſave my ſelf the labor of writing Packquets of Letters every Poſt-day, I have thought fit to anſwer thoſe Objections that are worth taking notice of in this public manner. The Gentleman whoſe Letter I have anſwer'd here, ſeems to be a Man of wonderful Candor and Ingenuity; and were it but for the ſatisfaction of him only, I ſhould not think my time miſpent: but however, hoping to do ſervice to the Public by it, I have ſuffered theſe Papers to come abroad as they are. I confeſs they are not ſufficiently poliſh'd for public View; and at the ſame time the pains I have bin at in compoſing them is too great to have them confined to the privat uſe of one perſon: and for the deficiences, I ſhall indeavor to ſupply them in ſome other Papers that will be got ready for the Preſs as ſoon as poſſibly I can.*

He that would paſs the Courſe of his Life without Envy, muſt believe what is generally believ'd, and ſpeak as others do; and whoſoever takes upon him to do otherwiſe, let the Succeſs of his Undertaking be what it will, the Reward he is like to meet with from the generality of Man-

kind, is to be reproach'd. The Inquiry after Truth is an Undertaking in which little Assistance is to be hoped; and there are so many Guards on all the ways that lead to it, that it's a very hard task to break thro. 'Tis an antient Proverb, that, Non omnibus licet adire Corinthum. *Whoever intends to overcome so many Difficulties, cannot hope to succede, but by his Diligence, Eagerness, and Earnestness: which Methods I have pursu'd as much as the hurry of my Affairs would permit.*

When I consider the great Number, and the Potency of my Adversaries, I am somtimes under the greatest Discouragements imaginable; and wish I had either gon on in the common Road, or that I had never appear'd in public, but have kept my Notions within my own Breast, and so I might have jog'd on without molestation. But when I call to remembrance the Guilt which that Person lay under, who made no improvement of his one Talent, but hid it in a Napkin, it dispels the former Considerations, and withal animats me to go on in the Work I have begun; which tho it may create me many Enemies, Truth at its first appearance never wanting Opposers, yet the thoughts of having indeavor'd to serve my Generation to the utmost of my power, give me that Peace and Satisfaction of Mind, of which all the united Force of my Enemies is not able to deprive me.

I never yet pretended to make People Immortal, my Indeavors having all terminated in this,

viz.

viz. *to be serviceable to my fellow Creatures in distress as much as I was able. The wise Man says,* That no man has power in the day of Death, and that there is no discharge in that War: *The Issues of Life and Death being only in the hands of the Almighty. But I am so unfortunat, that if I have a Patient that dies in three or four months, tho perhaps I scarce prescrib'd any thing for him, it is immediatly spread abroad with all the industry that Malice is capable of, that I have bin his Murderer; by which Reports I have sustain'd no small damage: but however, in spite of all this, Thanks to God, I every day gain ground, and don't in the least doubt, but in a very little time to get out of the reach of my Enemies Malice.*

I must confess my deficiency in so many things with respect to the ornamental part of Learning, which is scarce to be obtain'd out of the Universities, that I am altogether unfit to be a Champion in so great a Cause; but I have so much reason to be positive that the Hypothesis I have advanced is true, that from the Hints I have given I dare almost be confident, that even in my own time the Cudgels will be taken up, and the Hypothesis maintain'd and asserted by one who is able to go thorow with it better than I can. In the manifestation of the greatest Truths to the World, Men of mean parts are frequently made use of to be the first Broachers of them; but the further clearing of them is left to those of the most subtil and refined parts. And were my Hypothesis

but rightly handled, I don't doubt but it would prove the most Glorious of the kind that ever appeared upon the Stage of the World. However, till the thing is undertaken by some better hand, I shall not be wanting to prosecute it as far as I am able.

I beg one thing of such as shall give themselves the trouble of reading these Papers, which is, that they would not pass a rash Judgment upon me, but examin well what I have offer'd both in this and my former Tracts, laying aside Partiality and Prejudice; and if they find I have not made things sufficiently clear, if they inform me of it, and lay their Doubts before me, I will spare no Pains to make things yet more plain.

Villers-street in *York Buildings*,
Oct. 8. 1697.

Dr.

Dr. Tuthill's *LETTER to Dr.* Colbatch.

Dorcheſter in Com. Dorſ.
Aug. 9. 97.

SIR,

'I Have peruſed your ingenious Treatiſe of the *Gout*; in which you ſeem to accuſe *Alkalies* as the Original of all Diſtempers. Before I ſubſcribe to this Opinion, I deſire to be ſatisfied in a few Points. The grand Argument on which you build your Hypotheſis, is taken from the green Color of the Serum which ariſes from its mixture with Syrup of Violets. It muſt be confeſt, that Alkalies uſually give it this Tincture, and there may be ſomthing of an Alkaly, or at leaſt analogous to it, in the Serum: But notwithſtanding this, the many Inferences which you are pleaſed to draw from this *Phænomenon*, in my Opinion will hardly hold good. For, 1. If this Alkalizated Serum is the Original of Diſtempers, then it muſt follow that wherſoever we find this Serum, there muſt be likewiſe a Diſtemper: Now I appeal to your ſelf if the Blood of a healthy Perſon will not give Syrup of Violets a green Tincture, dos not then the Argument

'labor? may we not impute this *Phænomenon* 'to arise rather from a due mixture of the 'Principles, than from any vitiated Habit of 'Blood? But, secondly, there is another way of 'discovering an Alkaly besides that of its Ap- 'pearance, and that is by its effects, to wit, its fer- 'mentation with Spirit of Vitriol. Now I aver 'this green Serum will not ferment with the a- 'foresaid Spirit: Wherfore if it be an Alkaly, 'it is an Alkaly of a more particular nature. 'It must be granted that we oftentimes find 'in the Blood some Particles of a very warm 'nature predominant, in which cases I have 'found Acids to be of great use: but whether 'they are of an Alkalin nature or not, I leave 'the Learned to determin. If they are Alka- 'lies, then either fixt or Volatil; if fixt, how 'comes it to pass, that on the dissolution of the 'Texture of the Blood, they claim the highest 'place, and nothing will serve their turn, but 'they must needs swim in the Serum? If vo- 'latil, how is it that we many times find this 'warm Serum to be little better than insipid? 'Volatil Salts you know are aculeated, and 'affect the Palat strongly. May they not ra- 'ther be of a sulphureous nature, since it is the 'nature of such Substances to sit uppermost 'on the dissolution of Bodies? But thirdly, 'if Alkalies are the Original of all Distempers, 'whence is it that in Dropsies, Catarrhs, some 'Gouts, and other Distempers, we find the 'Texture of the Blood so thin? 'Tis obser-

'vable

'vable that thoſe Particles you term Alkalies, 'the more the Blood is ſaturated with them, 'of the more thick conſiſtence it is, as we ſee 'in Pleuriſies, Rheumatiſms, and other in-'flammatory Caſes (in which Diſtempers, if 'in any, theſe Alkalies abound) is not then 'its Tenuity rather to be imputed to Acids? 'Do not Acids immediatly put the Blood in a 'Fuſion, and render it thin? Beſides, if Alka-'lies did always offend and cauſe Pain, it muſt 'follow that Acids muſt give eaſe: But I aſ-'ſure you I have often experienced the con-'trary; for upon the exhibition of Rheniſh, 'White-wine, and other Acids, I have found 'the Pains immediatly exaſperated, and many 'times it has bin a long while e're they went 'off. Again, if the Gout proceed from an 'Alkaly, what is the reaſon you uſe ſo much 'Saſſafras in its Cure? Is Saſſafras an Acid, 'and ſo proper to ſubdue this Alkaly? I have 'only a word or two to ſpeak concerning the 'green Color of Syrup of Violets, and ſo I 'have done. I believe it may be turned green 'without an Alkaly: On the exhibition of it 'to Infants it comes away green very often, 'and brings away a great deal of green Matter 'by ſtool; and yet I believe they do not a-'bound with Alkalies. You may read in a 'late Author of undoubted Credit, that upon 'an Infant's ſwallowing a Doſe of Teſtaceous 'Pouder, an extraordinary Ferment was raiſed 'in the Stomach of the Child: Now how

'could

'could this Ferment be raiſed, if it had not an 'Acid to work upon? Beſides, dos not Ex- 'perience ſhew that nothing is ſo proper in In- 'fants Diſtempers as Alkalies? I have ſome 'more things to offer; but I deſire you would 'ſatisfy me as to theſe. I ſhould be glad to 'cloſe with your Opinion, and imbrace any 'thing that is new; for I believe Medicin, 'tho it has met with great Improvements of 'late, to be capable of far greater. I'll give 'you no further trouble, only after Thanks to 'you for your indefatigable Labor in ſearch- 'ing out the Truth of things, ſubſcribe my 'ſelf

Your Humble Servant,

F. Tuthill.

The

The Doctrin *of* ACIDS *in the Cure of* DISEASES *further asserted, &c.*

Worthy Sir,

I Have read your Letter with all the Pleasure and Satisfaction imaginable, the Objections you have raised against my Hypothesis being the most solid and substantial I ever yet met with: And you may assure your self that I have so great a Value and Esteem for Truth, that I would not dare to contend for any thing which is the Product of my shallow Understanding, that in the least stands in opposition to it. But as I would not by any means in the world oppose Truth, so at the same time I would not be guilty of so much Cowardice, as to quit its Interest, because I meet with a multitude of Opposers. Tho your Objections carry the fairest shew along with them of any thing I have met with of this kind; yet I don't at all doubt, but very easily to clear my self from them, which I shall indeavor to do with as much Candor and Friendship as you propose them.

Letter.

Letter. 'I have perused your ingenious 'Treatise of the *Gout*, in which you seem to 'accuse *Alkalies* as the Original of all Distem-'pers: Before I subscribe to this Opinion, I 'desire to be satisfied in a few Points. The 'Grand Argument on which you build your 'Hypothesis, is taken from the green Color 'of the *Serum*, which arises from its mixture 'with Syrup of *Violets*. It must be confest, 'that Alkalies usually give it this Tincture, 'and there may be something of an Alkaly, or 'at least analogous to it, in the Serum: But 'notwithstanding this, the many Inferences 'which you are pleased to draw from this '*Phænomenon*, in my opinion will hardly hold 'good.

Answer. As for my accusing Alkalies as the Cause of all or most Distempers, I must confess it was a very bold Undertaking, especially when by so doing I opposed such Multitudes of Great and Learned Men, who by very strenuous and learned Arguments asserted the quite contrary; whom I could not suppose but that I should greatly displease, by disturbing them in the quiet possession of an Opinion that had long bin imbraced by all sorts of people. I my self, as I elswhere acknowlege, was formerly as great a Stickler for the use of Alkalies in the cure of Diseases, and did as little believe that they were the Causes of them,

them, as any one of my hotteſt Oppoſers now dos. The Methods by which I came to change my Sentiments I ſhall here faithfully relate to you.

While I was fairly jogging on in the ordinary Method of Practice, a certain Gentleman recommended to me a powerful Acid, which he told me I might rely upon in the Cure of ſome ſorts of Fevers. When I conſider'd the thing as an exalted Acid, I could ſcarce give the leaſt credit to what he ſaid, tho at the ſame time I knew he had no deſign to impoſe upon me. However conſidering the fatal Succeſs that frequently attended the Uſe of *Alkalies* and *Alexipharmics*, (which however at that time I durſt not attribute to the Medicins, but to the Malignity of the Diſtempers) I was reſolv'd, upon the firſt poor Patient I had in a Fever, to try what the forementioned Acid would do: and after a Multitude of Trials, both upon Poor and Rich, I found I could by the means of my Acid cure moſt ſorts of Fevers much more effectually and certainly than ever I before could by the means of Alkalies and Alexipharmics. The Effects of this Medicin (which is a very cheap one, and known to every body) back'd with ſome other Obſervations, put me upon thinking that Fevers and other Diſtempers did not procede from the Blood's abounding with Acid Particles, but on the contrary with Alkalious ones: for if it had abounded with Acids,

the

the giving of more Acids must have aggravated the Symtoms; wheras on the contrary, I found by the means of my simple Acid (which however was communicated to me as the greatest Secret) I could take off the most dreadful Symtoms attending most Fevers, with all the ease imaginable. Upon which, being greatly in love with Chymistry and Chymical Operations, and having a convenient Laboratory, and all Necessaries at hand, I was resolv'd to examin the Blood of Persons in all Distempers as fast as I could conveniently procure it, to see what Substances abounded; and after a multitude of Experiments in most cases, I could never find any reason to charge Acids in any one. And that I may not be defective in my Duty to so friendly and ingenuous an Objector, I shall here trouble you with some of my first Experiments.

Experiment I.

July the 15*th*, I committed to Distillation the Blood of a corpulent Lady of a sanguin Complexion, who eats and drinks highly, and who had formerly for some years together an inveterat Leprosy, which I cured by *Cinnabarin* Medicins, *&c.* But at that time she had a severe Fit of a Rheumatism, occasion'd by taking cold. This Blood and Serum,

rum, as it came out of the Veins, weighed two Ounces, one Dram: I obtain'd from it 9 Drams of a clear Phlegmy Liquor a little impregnated with Volatil Alkalious Salt, which tho scarce manifest to the Taste, yet might readily be discerned by pouring a little of it upon some good Syrup of Violets, which it presently would turn green. Besides which Phlegmy Liquor, I obtain'd 5 Drams ten Grains of a strong Volatil Alkalious Spirit, as strong as the Spirit of *Harts-horn* usually sold in the Shops; 65 Grains of fetid Oil; and in the bottom of the Retort there remain'd 70 Grains of a light *Caput Mortuum*.

Experiment II.

July the 30*th*, I committed to distillation 7 Ounces 3 Drams of the Blood of a Woman who had for about three weeks labored under great Obstructions of her Nerves; she had a Lassitude and Faintness upon her, and in this time from Fatness she became very lean, and so weak as not to be able to go about the House: she likewise complained of a wonderful Coldness and Numbness in her Head, and was so deaf as not to hear any thing unless People spake very loud to her. She had always before this Illness bin used to eat and drink well, and was of a Constitution somwhat Phlegmatic. This 7 Ounces 3 Drams of Blood,

Blood, Serum, and all together, such as it came out of the Veins without standing to putrefy, afforded 4 Ounces 5 Drams of Phlegm, and in the Neck of the Receiver that caught the Phlegm a few Grains of Volatil Salt in a dry form, with which the Phlegm was so impregnated that it would readily turn Syrup of *Violets* green: one Ounce 5 Drams and 15 Grains of a strong Volatil Alkalin Spirit, two Drams six Grains of fetid Oil, and in the bottom of the Retort there remain'd two Drams two Scruples of a very light *Caput Mortuum*.

Experiment III.

August the first I committed to Distillation two Ounces and a half of the Blood of a Person in a deep Consumtion, who had a constant Hectic, and coughed much, bringing up by Coughing a great quantity of purulent Matter: He was worn away to a mere *Skeleton*, his Appetite quite gon, and was so short-breath'd that he was not able to walk at all. He sweat much for the first part of the Night, and when the Sweats left him he burnt prodigiously. It produced one Ounce 6 Drams of Phlegm, 3 Drams and a half of a strong Alkalin Spirit, 35 Grains of fetid Oil, and 62 Grains of *Caput Mortuum* as light as a Feather.

Experiment

Experiment IV.

August the 4*th* I committed to Distillation the Blood of a Gentleman who had scrophulous, cancerous Tumors in two parts of his Body, which at some times would be ulcerated, and at other times after the use of a certain Remedy, the Ulcers would be healed, but the Tumors remain. This Blood weigh'd 3 Ounces six Drams and a Scruple: It produc'd 2 Ounces one Dram of insipid Phlegm, 7 Drams and a half of Volatil Alkalious Spirit; of fetid Oil 40 Grains, and of *Caput Mortuum* one Dram 18 Grains.

Experiment V.

AT the same time I committed to Distillation the Blood of a Gentlewoman who had for many years bin afflicted with the Stone in the Kidnys, and at that time labored under the most terrible Fit of the Gout that ever I saw: It weigh'd 2 Ounces 7 Drams, 2 Scruples and 7 Grains. It afforded 2 Drams of a most volatil Alkalious Spirit before the Phlegm; one Ounce 4 Drams of Phlegm, and six Drams twelve Grains of Volatil Alkalious Spirit of the common sort; 2 Drams of fetid Oil, and one Dram and half of *Caput*

Mortuum. The Volatil Alkalious Spirit that came over before the Phlegm in this Experiment, was what I never saw before or since; but her Fit of the Gout was also the most extraordinary that ever I met with, there being scarce a Joint of any of the extreme Parts that was not at one and the same time affected.

Experiment VI.

August the tenth I committed to distillation four Ounces two Drams of the Blood of a young man of a sanguin Complexion, and in a state of Health: It afforded two Ounces six Drams of Phlegm that was perfectly insipid, and so destitute of Volatil Alkaly, that an Ounce of it would but just discolor a very small quantity of Syrup of Violets. It afforded also five Drams of an Alkalious Spirit, three Drams of heavy Oil, and two Drams four Grains of *Caput Mortuum*; which being broke into small Atoms, each Atom appear'd in my Microscope to be so many little Bodies of Fire. This *Phænomenon* very rarely appears, but when it dos so, it is for the most part in the *Caput Mortuum* of the Blood of people in a state of Health.

Experiment

Experiment VII.

THE same day I committed to distillation the Blood of a Gentlewoman who for many years had a short convulsive Cough, and was always subject to an Obstruction of her *Menses*; she was then big with Child, and besides her Cough, complained of a Sickness in her Stomach, and a loss of Appetite, with a lurking Fever, and an Inflammation in her Face. It weigh'd 7 Ounces six Drams, and afforded 4 Ounces 4 Drams and a half of Phlegm, impregnated with a highly Volatil Alkalious *Gas*, that would readily turn Syrup of Violets green, and in quantity effervesce with Spirit of *Niter*, *Sea-Salt*, *Vitriol*, &c. It afforded also one Ounce 4 Drams of highly exalted Alkalious Spirit, one drop of which would turn a considerable quantity of a strong Solution of Syrup of Violets as green as Grass; about 10 Grains of light Oil that swam upon the Spirit, and 3 Drams of a heavy fetid Oil that sunk to the bottom of it; and 2 Drams 2 Scruples of *Caput Mortuum*.

Experiment VIII.

August the 11*th* I committed to distillation 3 Ounces 2 Drams of the Blood of a Man of a black swarthy Complexion, and of a highly scorbutical habit of Body. It afforded one Ounce 3 Drams and 10 Grains of Phlegm, with a little volatil Alkalious *Gas* mixt with it; one Ounce 15 Grains of a highly strong Alkalious Spirit; 2 Drams of fetid Oil, which all sunk to the bottom; and 2 Drams of *Caput Mortuum.*

Experiment IX.

August the 12*th* I committed to distillation the Blood of a Maid of a pale Complexion, who had what we call the *Green-sickness:* It weigh'd 3 Ounces 6 Drams, and afforded one Ounce 7 Drams of Phlegm, unmixt with *Gas*; one Ounce 2 Drams and a half of a strong Alkalious Spirit; one Dram two Scruples and a half of fetid Oil, which all sunk to the bottom; and one Dram and a half of *Caput Mortuum.*

Experiment

Experiment X.

I Committed to distillation three Ounces 2 Drams of the Blood of a worthy Gentleman, who was very Hypocondriacal, having had a great Pain in his Back and Hips for many years; once a month he had violent distending Pains in his left Side, and at that time was much troubled with Wind. It afforded of an insipid Phlegm one Ounce 6 Drams; of a highly impregnated Alkalious Spirit one Ounce two Drams and a half; of fetid Oil, which all sunk to the bottom, one Dram 17 Grains; of volatil Alkalious Salt, which stuck in the Neck of the Retort in a dry form, 17 Grains; and of *Caput Mortuum* one Dram 5 Grains.

Experiment XI.

S*Eptember* the *9th* I committed to Distillation 3 Ounces of the Blood of an Honorable Lady, who had for two years a scrophulous Tumor in one of her Breasts, was of a very scorbutic habit of body, and subject to wandring Pains and nervous Obstructions. It afforded one Ounce 6 Drams of Phlegm, 6 Drams of strong Alkalious Spirit, one Dram 7 Grains of fetid Oil, and one Dram ten Grains of *Caput Mortuum.*

I could add a multitude of *Experiments* of this kind, but they belonging to another Piece, I have thought fit to trouble you with no more; and in relation to these few, I think it necessary to premise a few things, that I may make things as clear as may be.

To avoid the grand Objection, that by exposing things to violent Fires there are new Substances produced, that were not existent in the *Concrete* before, (which Objection I shall take occasion to make appear to be a very trifling one) I took the following Method, as the only one by which I could most clearly satisfy my self, being the most plain and easy one imaginable.

First I put the Blood as it came out of the Veins, *Serum* and all together, into a glass Retort with a very wide Mouth, to which I had a Receiver made as fit as possibly I could. I afterwards put my Retort into a sand Furnace, under which I made a very gentle Fire, which I increased by degrees, till the Drops began to fall at about a Second's distance one from another; in which state I continued it, till the Phlegm was all come over; and unless in one or two very extraordinary cases, I always found the Phlegm come over first: which perhaps to some may appear a Paradox, that what we commonly call *Volatil* Spirit and Salt should not rise before the *Phlegm*; but upon trial, I am sure whoever will give themselves so much trouble, will find it true. When it had

had dropt so long that one Drop upon two Drams of a strong Solution of Syrup of Violets would turn it green, I chang'd my Receiver, and continued my Fire till nothing more would come over; and this last I call *Spirit*, having always a proportion more or less of a fetid Oil mixt with it. Now what we call Spirit of this kind, is only a proportion of volatil Alkalious Salt mixt with so much Phlegm as will well dissolve it: Therfore I confess the most nice way of making these Experiments, is to separat the volatil Alkalious Salt by it self, without any mixture of Phlegm; but every Experiment requiring a fresh Vessel, and the Vessels themselves being very chargeable, it would be almost impossible for any privat man to make a sufficient number of Experiments without the assistance of the Public; which occasioned me in the Preface to my Tract of the *Gout*, to propose a Public Stock to carry on this Work, to bring things to an absolute certainty, if possible.

However, tho these Experiments are not the most accurat that might be made, yet they are plain and easy, and capable of being made by those who want the common *Apparatus* for a Laboratory. An Iron Pot set up in the corner of a Chimny, with a few Retorts and Receivers, are all that are necessary for the making of these Experiments; wheras for the other sort there are required long bolt-Heads,

each of which will serve but for one Experiment, with nice Furnaces, and so much other charge and trouble, that few privat Men are either capable or willing to be at, to make such a number of Experiments that are requisit. But by the way I have set down, a man may make a vast number of Experiments for a small charge; it is but going by one Rule in the making of them: and I don't see, but a man may act with as much certainty as in the other, only I must confess it is more liable to the Objections of Cavillers; but for these I have no value, it being only for such candid ingenuous Persons as your self, for whom I am willing to take pains.

Let a man but nicely observe to change the Receiver, when one Drop will turn the Syrup of Violets green, and that Blood that affords the greatest quantity of such Spirit afterwards that abounds with such Particles, may reasonably be supposed, nay I think dos certainly appear to abound most with Volatil Alkaly, or at least what by all Mankind is taken to be such, it answering all the *Phænomena* that Spirit of *Harts-horn* and *Salt Armoniac* will do; affecting the Palat in the same manner, and making an Effervescence with all sorts of Acid Spirits, such as Spirit and Oil of *Vitriol*, *Sulphur*, *Sea-Salt*, *Nitre*, *Vinegar*, &c. Now if such a Substance as this be not to be call'd an Alkaly, I should be glad to be inform'd what

is;

is; but it is what at present I call so for want of a better Name: and that Blood that by this simple easy way of Distillation affords the greatest quantity of Spirit of equal Strength, I cannot forbear to charge as abounding with a greater quantity of Alkaly than that which affords less. And in examining the foregoing Experiments, it plainly appears that the Blood of People laboring under the Distempers there mention'd, affords a much greater quantity than that of the healthy Person; that of the person in a Consumption affording the least of any of those in a morbid state, for which a very good reason may be given: the great quantity of luxuriant Alkaly being thrown upon the Lungs, which causes the Ulceration there, and the discharge of such a quantity of *Pus* or Matter afterwards as emaciated the Body even to a *Skeleton*.

As for the Fire's producing new Substances, which were not existent in Bodies before, or which is more pertinent to the point in hand, making Acids Alkalies or Alkalies Acids, or producing Alkalies or Acids from Bodies in which they did not exist before, I think there is not the least weight in it: I am sure it is contrary to my Experience, and I believe to the Experience of all inquisitive Chymists that have ever gon before me; tho I confess there have bin some superficial ones that have dream'd such things; but to the best of my apprehension, without the least reason for so doing.

doing. I never could find, manage *Vitriol* in what manner, or with what degree of Fire you pleaſe, but it will always produce an Acid Spirit; do the ſame by *Harts-horn*, *Blood*, &c. and it will always produce an Alkalious one, or at leaſt what we call ſo: for if people will cavil about Words, we ſhall never have an end of Controverſies; and indeed moſt of the Controverſies we have had in the World have bin more about Words than Things; Men have contended more earneſtly for the Shadow than the Subſtance. But my preſent Controverſy with my Worthy Brethren is not ſuch; our difference is whether Diſeaſes procede from the Blood's abounding with Alkalious or Acid Subſtances, things which differ much more than in Name, their Natures being directly oppoſit to one another. I confeſs ſome have complain'd both of me and others who have written concerning *Alkaly* and *Acid*, that we have not ſufficiently explain'd what we mean by thoſe Names: This I take to be a diſpute about Words only, ſince there are few at this day, who upon the firſt view of any of thoſe things of either Tribe, eſpecially of the manifeſt ones, cannot readily give their Judgments to which they belong; and this even among thoſe who are not Phyſicians: and therfore tho we may not be able perhaps to give an exact Definition of the Words, yet ſince by theſe Words all people know we mean ſuch and ſuch Subſtances whoſe Natures are directly

directly contrary, that ought to breed no difference. And for my part, I know no other use of Words, than by means of them to impart my Mind to others; if that Intention be once answered, I care for no more, but shall leave the *Philologists* to squabble as long as they please. But as for the producing either Alkalies or Acids by the means of Fire out of those Bodies in which they did not exist before, or the changing of an Acid into an Alkaly, or producing either out of the other that was simply one of them before; if any one will shew me such an Experiment, or demonstrat such a thing without fallacy, I shall own my self his humble Servant.

As for the Inferences I draw from the Serum of the Blood turning a Solution of Syrup of Violets from a blue Color to that of Greenness, being what all manifest Alkalies will do, all manifest Acids changing the same blue Color into Redness; I see no reason to recede from what I have said concerning it: For if it be true that all manifest Acids do change a Solution of Syrup of Violets from a blue Color to that of Redness, and all manifest Alkalies change the said blue Color into a green one; if the Serum of the Blood dos so change the Color, a man may, to the best of my apprehension, without presumption conclude, that that Serum which changes a Solution of Syrup of Violets from blue to green, abounds with Alkalious Particles: And I am sure if it abounded

bounded with Acids, it would not fail of changing the blue Color of the ſaid Solution into a red one. Which is what any man may eaſily try; let but a ſufficient quantity of any Acid Spirit be mix'd with the Serum of a ſick man's Blood, that will before in a ſmall quantity turn a very large quantity of Solution of Syrup of Violets from blue to Greenneſs; if the Acid be ſo much as will overpower the Alkaly in the Serum, inſtead of turning a Solution of Syrup of Violets green, it will immediatly upon the mixing of it become red.

But that you may ſee I am not the only Perſon who has made uſe of this Experiment to diſtinguiſh between Alkalies and Acids, I ſhall produce an Authority or two for my ſo doing. Dr. *Fran. Andre* of *Caen*, in his *Diſcourſe* concerning *Acid* and *Alkaly*, pag. the 65*th*, *Engliſh* Tranſlation, tells us, That the principal Cauſe of permanent Colors comes only from the different nature and different mixture of Acid Salts with Alkaly Salts, which we may obſerve by divers Experiments.

Experiment I.

All Acids *deſtroy blue Colors, and all* Alkalies *make them reappear.*

Expe-

Experiment II.

Syrup of Violets, *which is a Composition of Acid and Alkaly, becomes the faireſt green in the World, when mingled with ſome Alkaly, as with Oil of* Tartar *made* per deliquium, *and reddiſh when ſome Acid is mingled therwith.*

Swalve in his Tract of *Alkali* and *Acidum*, pag. 141. has it much to the ſame purpoſe: *Syrupum Violarum præ oculis habeto, quia ſuſpectam habes Solutionem plumbeam per Acetum in Saccharum redactam. Syrupus ille ab Acido quovis rufeſcit, ab Alkali vireſcit; hinc inſervit aptiſſime dignotioni utriuſque. Quodvis Acidum eum ſiſtit rubrum, ſicut quodvis Alkali viridem, fixa & volatilia uniuſmodi ſunt, &c.*

But my Hypotheſis dos not altogether hang upon ſo ſlender a Thred as the change of Color, tho that be a better Foundation than a great many Hypotheſes are built upon. You may very well remember that I brought this Experiment upon the Stage only to ſatisfy Gentlemen who have not the conveniency of making more elaborat ones: And all Mankind having imbibed the Notion, that if any thing ail'd them, they immediatly concluded it proceeded from an Acidity of their Blood, I therfore thought it my Duty to convince them of the contrary in the moſt familiar manner I could; but I never expected that Phyſicians ſhould take up with it, I referring them to a more

more certain Method, *viz.* to analize the Blood of their ſick Patients, and to compare the Subſtances produced from it, with the Subſtances produced from the Blood of People in a ſtate of Health: And if once they will but take that Method, I am morally certain that the number of my Enemies will every day decreaſe. But let People continue to ſay what they will of me, I ſhall indeavor to ſatisfy my ſelf, and to act for my Patients with as clear a Conſcience as poſſible: And if after all I am reproached by my Brethren, I muſt bear it as well as I can. It never will be in any Phyſician's power to make people immortal; but at the ſame time I am abſolutely certain that peoples Lives are frequently prolonged by the uſe of proper Remedies; and I doubt not but they are alſo ſhortned by the uſe of improper ones: And if we are miſtaken as to the Cauſe of Diſeaſes, I don't ſee how we can readily find out proper Medicins.

Letter. 'For firſt if this Alkalizated Serum 'is the Original of all Diſtempers, then it muſt 'follow that wherſoever we find this Serum, 'there muſt be likewiſe a Diſtemper: now I 'appeal to your ſelf if the Blood of a healthy 'Perſon will not give Syrup of Violets a green 'Tincture; dos not then the Argument labor? 'may we not then impute this *Phænomenon* to 'ariſe rather from a due mixture of the Prin-'ciples than from any vitiated Habit of Blood?

Anſwer.

Answer. I confess this is close arguing, and much to the purpose: yet you may remember I no where say that the Serum of healthy Persons Blood will not turn a Solution of Syrup of *Violets* from a blue Color to that of Greenness; but on the other hand, I have asserted that the Blood of those laboring under any Distemper I have met with will do it, in order to prove that the said Distempers did not procede from Acids; because if it had abounded with Acids, instead of turning it from blue to green, it would, as before observed, have turned it from blue to red. Well, but still the Serum of the Blood of a Person in health will cause the same change in the Solution of Syrup of *Violets* as that of a sick one; and therfore to rid my self of that Difficulty is the great thing I have now to do.

First, I all along throout my Tract of the *Gout*, the Piece you refer to, and elswhere, indeavor to prove that the Blood of Persons in a morbid state abounds more with Alkalious Particles than that of healthy Persons, but no where say that the Blood of healthy Persons has no Alkaly in it. And that the Blood of sick Persons in all or most Distempers abounds with such Particles more than that of such as are in a state of Health, is to be demonstrated several ways: *First*, if you take an equal Proportion of the Serum of the Blood of a healthy Person, and of that of a Person in a Fever, Pleuri-

Pleurisy, *&c.* and pour them into the same Quantities of Solution of Syrup of Violets of equal strength, you will find that wherin the Serum of the sick Person's Blood was pour'd, to be much greener than the other. *Secondly*, If you take two Ounces of the Blood of a healthy Person as it comes out of the Veins, Serum and all together, and two Ounces of the Blood of a Person in a Fever, Pleurisy, a Fit of the Gout, *&c.* and commit them to distillation in the same degree of Heat, you will find the Blood of the sick Person shall produce a much greater quantity of Alkaly than that of the Person in health.

Secondly, What shall I do with the Alkaly found in the Blood of healthy Persons? Because every body has some Alkaly in their Blood, must every body therfore labor under some Distemper? Why truly I can't say I ever met with a Person, who upon strict Inquiry had not some Complaint or other to make. Mankind since the Fall is subject to Death every moment; there being a Principle of Death, in opposition to that of Life, implanted in our Natures; and not only in ours, but in the Natures of every thing else for our sakes: *And God said to* Adam (upon his Fall) *Cursed be the Ground for thy sake*, &c. I confess many in our Age will laugh, and ridicule me for having recourse to Sacred Writ, especially to the Writings of *Moses*, which they look upon as Romance: but let 'em laugh on;

if

if there were not a Principle of Death within us, how is it possible for a Man one hour to be in a good state of Health, and the very next to be expiring? How this may be, I shall indeavor to demonstrat as clearly as possibly I can.

All the Alkaly that is to be found in the Blood is most certainly an Excrement, and in a way of being carried off by some of the Emunctories; and if any of these chance to be stopt, that this excrementitious Alkaly has not room to pass out, there is a Distemper of some kind or other caused, the Blood being overcharg'd with this excrementitious Matter. How many Distempers are occasion'd by what we call taking Cold, which is nothing but a Constipation of the Pores? What is the occasion of the *Jaundice* but an Obstruction of those Vessels in the Liver which separat the bilious Particles from the Blood? and what dreadful Distempers dos the Jaundice frequently cause? How are Mortals tormented by the Stone in the Kidnys and Bladder? and what is the original Cause of them, but an obstruction in the Kidnys, wherby the excrementitious Alkaly, which should be carried off that way, by its over-long stay in those parts is converted into that Substance we call a Stone? And whoever will give themselves the trouble of distilling Stones either from the Kidnys or Bladder, will find 'em compos'd of Alkalious Particles. I could expatiat, and give an account of the

Cauſe of all or moſt Diſtempers attending Human Bodies, from the excrementitious Alkaly not being carried off by the proper Emunctories. And I appeal to all candid ingenuous Perſons, even my greateſt Enemies, whether all the Excrements of our Bodies are not Alkalies. When I ſpeak of *Excrements*, I don't mean that which is carried off by Stool, having told you in another place, that my ſqueamiſh Stomach would never give me leave to make Experiments upon that, to know what Parts it contain'd; but every body knows that the greateſt part, if not all of the Bile, is carried off that way; and that the *Bile* is an Alkaly I ſuppoſe no body doubts.

I know many will reply, That they will allow me that the Matter, or at leaſt the *Saline* Subſtance diſcharged by the *Glands* of the Skin, by *Urin*, the *Bile*, *Tears*, &c. are alkalious; but, ſay they, there is another very conſiderable Excrement which I take no notice of, to wit, the Matter diſcharged from the Glands of the Mouth, call'd *Spittle*, which in all reſpects ſeems to be an Acid. To which I anſwer,

That the *Saliva* or Spittle is ſo far from being an Excrement, that it is one of the moſt noble Juices our Body affords, and the only *Menſtruum* furniſh'd by Nature for diſſolving the ſolid Food we eat, and turning it into a nutritious Juice: For by chewing our Meat, we compreſs the *Salival* Glands, and cauſe them

them to throw out a sufficient quantity of the Juice contain'd in them; which being mix'd with the Food, is carried along with it into the Stomach, where the Office of Digestion is perform'd. But those who swallow their Meat without chewing, seldom or never digest it, and are always lean. Now when I speak of *Saliva* or Spittle, I don't mean that invisicated, coagulated Substance which People hauk up in a morning, or discharge when they have a Cold as they call it, that being a degenerat *Saliva*; but that thin, limpid Substance that some great Tobacco-takers lavishly let run from them: which is the only reason that the smoking of Tobacco takes away most mens Appetites; for would they smoke Tobacco as a great and worthy Prelat and my self do, and as all the *Turkish* Nation do, which is to swallow their Spittle, they would rarely want an Appetite.

But that I may return to my proper business, which is to prove that all the Alkaly we have in our Blood is an Excrement, and in a way of being carried off as such, or for want of being carried off, would cause a Distemper of some kind or other. Here give me leave to acquaint you, that according to the best of my apprehension, the Matter of all our Distempers is the same; but according to the difference of the Part immediatly affected, the Distemper differs. And indeed when I consider the wonderful Structure of our Bodies, of

what multitudes of minute parts it is compoſed, inſtead of a ſurpriſal at our being ſick and out of order ſo often as we are, I am e'en amaz'd to think we are ever well. All Alkalies that I know of, will preſently cauſe Rottenneſs and Putrefaction in animal Subſtances, as may be ſeen in making of Glovers Leather, an Inſtance of which I have given in my Tract of the *Gout*, from a very good hand. Nay, it is a thing eaſily to be experimented by any one; for let but a piece of Fleſh of any kind be put into a Liquor well impregnated with Alkaly, and in a ſmall time (tho in the Winter, when things are not ſubject to putrefy) it will turn to a mere *Putrilago*, a Maſs of Rottenneſs and Corruption: wheras let a piece of the ſame Fleſh be put into Liquor impregnated equally ſtrong with any Acid, and it will preſerve it from Putrefaction. Alkalies, whether volatil or fixt, being applied to the Skin, will either cauſe a Mortification, or deſtroy the Tone of the Part; wheras Acids of equal ſtrength will prevent Mortifications where they are actually beginning, and frequently reſtore the Parts to their Tone where it is loſt.

But it may be reaſonably askt, Where is the Acid in the Blood that dos us all that ſervice you ſpeak of, or what becomes of all the Acid we take in, you owning Bread to be an Acid, and ſeveral other things daily uſed by all Mankind;

kind; when in your Analysis of the Blood you mention no such thing, and seem to intimat, that tho People take them in very great quantities; yet they never abound so as to cause a Distemper? This is what may reasonably be offer'd, and is very necessary I should clear as well as I can.

The Life of Man I take to be a Fire or Flame, and all we eat and drink, together with the Air we draw in, to be as Fuel for this Flame; and that which is not proper Fuel for it is cast off as Excrement. Now I appeal to all Mankind conversant in Chymistry, whether the Excrements of Fire, or of the Fuel of which it is made, viz. *Ashes* and *Soot*, be not Alkalies; and that our Lives are nothing else but a Flame or Fire of the same nature with that commonly used, or very analogous to it, I think is plain.

It is the nature of all common Fire to consume whatever is a proper *Pabulum* or Fuel for it, and to leave its Excrements behind it, which, as before observ'd, are Ashes and Soot; in the Ashes is contain'd a fixt Alkaly, and in the Soot a volatil one. It is very plain that the Body of Man would soon be consum'd, unless supplied with proper Food; and how could this be, unless there were somthing to consume it?

Common Fire cannot subsist where there is not a due access of Air to it: Is it not the very same thing with the Life of Man? let

him but be incloſed in a place where the Air is not capable of coming at him, and immediatly he expires. It's well known that 'tis the common practice of Miners, and thoſe who have occaſion to go into ſubterraneous Vaults or Paſſages, to carry Candles, Torches, or ſome ſuch things along with them, not more for the convenience of the Light they afford 'em in ſuch dark Places, than for their ſecurity againſt the moſt imminent Danger, *viz.* the loſs of their Lives: for as ſoon as they once perceive their Lights to grow dim, common Prudence and Experience teaches 'em to retreat; and whoever has chanced to be ſo fool-hardy as to advance after the Light has bin extinguiſh'd, has ſcarce ever return'd either to repent, or give an account of his Folly. A fatal Accident of this kind happen'd to two Men in a great Vault belonging to my Father's Houſe, into which, if we put a large Pan of Charcoal well lighted, they would be extinguiſh'd in a moment; and the two Men before-mention'd, as near as we could gueſs, loſt their Lives in as ſmall a time.

Heat and *Warmth* are the conſtant concomitants of Fire: And that there is both Heat and Warmth in the Body of Man, none that has his Senſes will deny. Now why ſhould I make a diſtinction between Heat and Warmth, when they only differ in degree? But not to ſtand any longer about that matter: How is it poſſible for the Heat of our Bodies to be ſuſtain'd,

tain'd, unless there were a Fire within us to do it? We are generally as hot, if not hotter in Bed, tho we use no Exercise to excite the motion of our Blood and Juices, than when we are up and in motion. Nay, mere Motion, let the great *Des Cartes* and his Followers say what they will, will never cause any Heat in fluid Bodies, tho excited never so much: I confess in solid ones, upon violent Friction or the like, there will a Heat arise; but what relation has that to us, when we are asleep?

There is a receiv'd Maxim, that there is no Smoke but there is some Fire: Every body must be sensible what vast quantities of Steams are continually discharged from all parts of our Bodies; and how that comes to be, unless from some Fire within us, I cannot understand.

I confess I have the concurrence of some of the greatest Men perhaps in the world, that the Life of Man is a Flame; but at present I have not leisure to peruse their Writings to see what they have said on this Subject.

If any man shall ask me, how this Flame came to be first kindled? I shall make no other reply, than desire him to inform me how the *Ovum* came to be impregnated with the Masculin Seed, so as to make it capable of producing a Human Body? and when he has done that, I will tell him how this Flame came to be first kindled.

The next thing I have to do, is to consider what is the proper *Pabulum* or Fuel for Fire; and this every body knows must be something sulphureous. Now there is scarce a *Sulphur* we know of that is not combin'd with an *Acid*; Sulphurs seeming to be the genuin Vehicles for Acids, with which they are generally united, few Sulphurs being void of Acids, and few Acids void of Sulphurs; and as the one or the other predominats, so they are denominated either *Acido-Sulphurea* or *Sulphureo-Acida*. As Sulphurs are the Vehicles of Acids, so Acids seem to be a sort of *Vinculum* to Sulphurs, by which they are hindred from Dissipation. Whenever a Sulphur is void of Acid, it is of so volatil a nature, that it is scarcely to be preserved from Dissipation: Not that I suppose any Sulphurs to be perfectly destitute of an Acid; but the less Acid they have mixt with them, the more volatil they are; such are *Rectified Spirit of Wine*, *Camphire*, &c. And Mr. *Godfry* assures me he can make Spirit of Wine so volatil, that a drop of it won't fall to the ground, but disappear almost as soon as it is disingaged from the Mouth of the Bottle in which 'tis contain'd. Now the purer the *Pabulum* is, the less Excrement is produced. Spirit of Wine and Camphire produce little or no Excrement at all; wheras *Oil Olive*, *Bees Wax*, *Tallow*, &c. afford a great deal of Soot, in which is contain'd the volatil Alkaly. Most Vegetables commonly in use for burning,

ing, afford a great quantity both of Ashes and Soot, some more of one, and less of the other; as *Oak* a great quantity of Ashes, in which is contain'd the fixt Alkaly, and but a little Soot, in which the Volatil Salt is contain'd. *Beech* on the other hand produces but a small quantity of Ashes, and a large quantity of Soot: this is what I have bin inform'd of by those who burn quantities of Wood. The Substances we live upon, and are nourish'd with, are not to be reckoned among the number of those which afford no Excrement upon burning. And by the way I can't understand what should become of all we eat and drink, unless, as before observed, there were a Fire or Flame within us to consume it; and the Consumtion is so great that we are not able to live without a constant and frequent Supply. And that which to me is none of the least Arguments to prove that our Life is a Flame, is what is manifest by every day's Experience, *viz.* Let a very fat Man be seiz'd wth a Fever, or any such Distemper, attended with a total loss of Appetite; the Fat, which is the proper Fuel for Fire, will first be consumed: and in such Distempers it is frequently seen that very corpulent Persons will in a small time be wasted to a Skeleton, when at the same time the sensible Evacuations of Urin and Stool are less than in a time of Health; which thing could not be, unless there were a Flame to cause that Consumtion: And wherever there

is

is a Fire or Flame, especially when supplied with gross matter, there must be a throwing off of Excrements; which is the reason that the Blood in Fevers, and other Distempers of that nature, abounds more with volatil Alkaly than that of well People, because the Flame is more excited at that time; and the secretory Vessels design'd for that purpose being some way or other obstructed, cannot carry off the Excrements so fast as they are produced.

Let us consider what all the Alkalious Salts, whether volatil or fixt, are. I suppose no one can produce me a fixt Alkaly, which is the bare Product of Nature: the very Name it self being derived from the Salt of the Ashes of the Herb *Kaly*, as I have observ'd in the *Appendix* to my *Essay of Alkaly and Acid*, in concurrence with several Authors, who have written on the same Subject; tho none that I know of have ever written upon it from the same design with my self. But to shew I am not singular, I shall produce two or three Authorities. *Swalve* in his Treatise of *Alkaly and Acid*, pag. 48. defines it thus. *Originem nominis Alkali ab incineratâ herbâ Ægyptiacâ Kali desumtam haud ignoras: Salibus illud fixis & lixivialibus abhinc applicatum; illudq; primariò judicatum Alkali, quod Geneſin suam è cinere & lixivio traxerat.* *Tachenius* in his *Hippocrates Chymicus* defines it much after the same manner. *Fit itaq; Sal Kali ex herbâ Kali,*

magna

magna copia in Ægypto proveniente, quæ ibidem viridis exuritur, & ad nos transfertur; à quibusdam vocatur etiam Soda, Alumen catmum, & vero nomine Sal Kali appellatur; non reperitur tamen Sal Kali in Natura, nec in omnibus tribus Regnis, nisi ab Artifice ignis ope producatur. For my own part, I could never yet see any such thing as a *fixt Alkaly* obtain'd any other way than from the Ashes of Plants, which are that part of 'em that is altogether unfit for Fuel to common Fire, they plainly appearing to be an Excrement, and such as will rot and destroy all Bodies, especially Animal ones, that they are mixt with. In Animal Bodies there is no such thing to be found unless in the Bile, which is an Excrement, and seems to be as genuin an Excrement of Fire as any thing whatsoever, both from its burnt Tast, Color, *&c.* and I am sure if detain'd in the Body, will play the Devil.

As for *Volatil* Alkalies, they are to be found in *Soot*, in *Plants* after putrefaction, in *Urin*, in *Horns* and *Hoofs* of Animals, and in *Blood*; and tho Sweat abounds with a great quantity of it, yet 'tis not to be obtain'd in quantities sufficient to draw Volatil Salt from it. Soot is the volatil Excrement of Fire, or of the Matter of which Fire is made. Urin is an Excrement of our Bodies, and the volatil Salt in it the Excrement of Animal Fire, or of that which is its *Pabulum* or Fuel. The Horns and Hoofs of Beasts are generally allowed to be excre-

excrementitious parts of their Bodies, and afford the greateſt quantity of Volatil Salt of any thing beſides. As for Blood, the Volatil Alkaly obtain'd from it, is only the excrementitious part of it, or rather of the vital Flame, or the *Pabulum* of it, in a way of being carried off by ſome of the Emunctories, which, if it be obſtructed in its paſſage, affects the Body with ſome Diſtemper or other. As for the Volatil Salt obtain'd from Plants after putrefaction, I ſhall give you a particular account of it, becauſe ſome men have made a great ſtir, and ſpent a great deal of time in queſt after it, ſuppoſing it one of the grand Medicins of Nature. Moſt, if not all Vegetables do principally conſiſt of a volatil Acid and a Sulphur, which make them a proper Fuel for Fire: Now let any of the *Aromatic* Plants, ſuch as *Roſemary*, *Sage*, *Lavender*, *Mint*, &c. be well dried, and afterwards put into a Hole in a moiſt Cellar, and ramm'd down very hard; let them lie without a Cover till they grow hot; after they have done ſo ſome time, and the Acido-ſulphureous parts are exhal'd (which is much the ſame as if they had bin burnt) they will contract a ſtinking ill Smell: when they are in this ſtate, put 'em into a tall glaſs Body, with a glaſs Head, and in a gentle heat of Sand you will obtain a volatil Alkalious Spirit and Salt, good for nothing I know of but to bring other Bodies into the ſame ſtate of Corruption that the Plants

from

from which it was extracted were before it was drawn from them. Thus I have let you see what is my Judgment concerning *Alkalies*, and how they are produced.

But for the *Acid* we take in as Food, or otherwise, that, together with the *Sulphur*, is used as a *Pabulum* or Fuel for the vital Flame; and were not the sulphureous Particles in some measure suppress't and detain'd by means of an Acid, the thred of our Lives would be very short. Dr. *Andre* of *Caen* in *Normandy*, in his Discourse of *Alkaly and Acid*, speaking of Acid, *pag.* 21. Engl. Translation, says, *There is nothing in this World which ows not its birth to an acid Salt: Nothing can live or be multiplied without it: It is that Soul of the World, of which the Antients have so often told us.* *Tachenius* in his *Clavis Hippocratis Medicinæ*, from pag. 3, to 11. gives great *Encomiums* of it, some of which I shall here transcribe. Speaking of *Acid*, he brings in *Lullius: Nos & multi alii, inquit, vocamus illum Filium Solis; nam primò per Solis influentiam fuit generatus per naturam sine adjutorio scientiæ vel artis; & ideò Aristoteles vocavit Solem patrem, & Terram matrem omnium vegetabilium, &c.* Heafterwards says, *Acidum itaq; est & pingue antiquissimum principium, & omnium rerum vita & fons, quod variis nominibus nominarunt Scriptores, ut Ignem, Solem, Aurum, Spiritum, Sulphur, Forma, & sexcentis aliis nominibus, quæ omnia synonima sunt; estq; eadem res, cui tamen*

men diverso respectu diversa nomina imponuntur; nobis tamen eam hic & ubique commodiore opportunitate Acidum vocare libet. Again, *A Sole itaq; ut a fonte defluunt Acidum naturale & Lumen vitale, quæ reipsa sunt idem, sed officio distinguuntur: Acidi enim munus est ad interiora Naturæ penetrare; luminis verò exteriora patefacere, utcunq; solis radii operentur; adeoq; Sol est primum naturale organum, cujus accessu & recessu omnes naturæ operationes variæ reguntur, intenduntur ac remittuntur. Hinc Cosmopolita ingeniosissimus, si non esset vis vegetabilis sulphuris (id est Acidum pingue & filius solis) non coagularetur aqua in herbas: si itaq; Acidum à sole fluens infunditur in materiam, ex. gr. mineralem statim recipit determinationem naturæ, & virtutis mineralis: & sic de cæteris animalibus, & de Vegetabilibus rebus dixit Lullius; & propterea quòd hæc aciditas naturalis omnibus mundi materiis copulatur, Mercurii nomen à sapientibus adepta est. Et licet oculus vulgi quotidie videat Acidi naturalis multiplicationem, necnon incorporationem, attamen illud non cognoscit: exempli loco sit minera salis petræ Patavii jam evacuata, quæ quinque vel septem annorum decursu rursus repletur, est enim terra ejus nutrix, Hermete teste, unde hic spiritus in illa corpus assumit, atq; fit inflammabile nitrum.*

Acids are without doubt the most perfect Bodies in Nature, since they cannot undergo a Putrefaction; and what we take in by our Mouths is so far from being too much for us, that

that besides it we are not able to live without drawing in fresh supplies from the Air every moment; and that the Air is fill'd with Acid Salts, a Multitude of common and obvious Experiments do evince: as for instance, Let *Vitriol* be distill'd with the most violent Fire imaginable, so as not to yield the least drop of Acid Spirit more; do but take out the *Caput mortuum* or *Colcathar*, and expose it to the open Air under a Shed, where it may not be rain'd upon, and in a few months it will become good Vitriol again, and yield as much Acid Spirit as it did at first time; and this it will do *ad infinitum*. The same thing may be done by the *Caput mortuum* of Sea-salt, Nitre, *&c.* Now if the Air did not abound with Acid Particles, from whence came those insipid Bodies that were totally deprived of the Acid they had in them by the first Distillation, to regain the same quantity of Acid they had before they were distilled? If you expose the *Caput mortuum* of those things that by Distillation had afforded an Alkalious Spirit or Salt, that *Caput mortuum* will never regain its Alkaly again, let it lie never so long; which argues plainly that the Particles of the Air are not Alkalious: And therfore were Acids so injurious to mens Bodies as some would have us believe, every Draught of Air we take in must poison us, since it is full of Acid Particles; and I believe no body doubts but the Air has a free Communication with

with the Blood, if not by the Lungs, at leaſt by the receptory Pores of the Skin: But I think it's plain there is a Communication with it both ways.

By all the ways I could yet contrive, I have not bin able to procure one Grain of pure Acid from the Blood of either healthy or ſick People: but in the before recited Experiments you find always a proportion of fetid Oil, with which the Acid is imbodied to make it a proper *Pabulum* for the vital Flame; and when once *Acid* and *Oleaginous* Bodies are well united, which they will readily do, it is no eaſy matter to cauſe a ſeparation of them. Now the reaſon this Oil has ſuch a very ill Savor, is from its coming over the Helm along with the Volatil Alkaly; all Alkalies, whether volatil or fixt, giving a very ill ſmell to ſulphureous oleaginous Bodies, eſpecially if expoſed together to a great degree of Heat; and the Heat required to bring 'em over the Helm is much greater than that of our Bodies, tho in a burning Fever: Yet from the Action of the Volatil excrementitious Alkaly upon the ſulphureous parts of the Blood, may I think a good reaſon be given for the Symptoms that attend moſt, if not all Fevers; for all Alkalies deſtroy Sulphurs, as may be ſeen in the making of *Soap*, *Hepar, Sulphuris*, &c. Sulphurs are the active Principle in both Animal and Vegetable Juices; Alkalies in breaking and dividing the Particles of the Sulphurs excite Fermentations, and by degrees

degrees cause a total dissipation of them. Acids are a sort of *Vinculum* to Sulphurs, and therfore suppress Fermentations, keeping the Sulphur from dissipation: From whence I infer that a true *Oleosum* must be the great Medicin; yet it is not such a one as commonly gos under that name, which is only a Combination of volatil Alkaly with Spirit of Wine and Aromatic Oils or Spices; but it must be an *Acido-oleosum*, an exalted Acid, combin'd after the foresaid manner, by which the Life of Man it self is chiefly supported.

If any one asks me what I mean by *Sulphur*; my Answer is, whatsoever is inflammable. And with such kind of Substances the World is almost every where fill'd: For without them neither the Lives of Men nor Beasts could be any way supported; and therfore such places as are best supplied with them, are very well stockt with Animals of all kinds; wheras those that are deficient of them, such as the Desarts of *Arabia*, &c. are almost wholly destitute of all kinds of living Creatures.

Letter. 'But secondly, there is another 'way of discovering an Alkaly besides that 'of its Appearance, and that is by its effects, 'to wit, its Fermentation with Spirit of *Vi-* 'triol. Now I aver this green *Serum* will not 'ferment with the foresaid Spirit: Wherfore 'if it be an Alkaly, it is an Alkaly of a par- 'ticular nature. It must be granted that we

'oftentimes find in the Blood some particles of 'a very warm nature predominant, in which 'cases I have found Acids to be of great use: 'but whether they are of an Alkalin nature 'or not, I leave to the Learned to determin. 'If they are Alkalies, then either fixt or vo- 'latil; if fixt, how comes it to pass, that on 'the dissolution of the Texture of the Blood 'they claim the highest place, and nothing 'will serve their turn, but they must needs 'swim in the *Serum*? If volatil, how is it 'that we many times find this warm Serum to 'be little better than insipid? Volatil Salts 'you know are aculeated, and affect the Palat 'strongly. May they not rather be of a sul- 'phureous nature, since it is the nature of such 'Substances to sit uppermost on the dissolution 'of Bodies?

Answer. I own 'tis one of the genuin and constant Effects of an Alkaly to cause an Effervescency, when mixt with Spirit of *Vitriol* or any other Acid Spirit; but whether this Effervescency may be accounted a Fermentation, I greatly question: tho Alkalies will excite Fermentation in fermentable Liquors, as is well known to many Mechanics, and I fear too well by the Brewers about this City. What you mean by the *green Serum* which will not ferment or effervesce with Spirit of *Vitriol*, I cannot tell: But sure I am, if you put a little Spirit or Oil of *Vitriol* into a small bottle, and pour

pour some Serum of Blood that will turn Syrup of Violets green upon it, 'twill immediatly become intensly hot, and a great many Bubbles will presently rise, which looks very like a Fermentation, if it be not one: therfore when you made this Experiment, on which you are so positive, there must needs be some Error committed; for upon your urging this thing, the first opportunity I had, I made the Experiment afresh, and it succeded the very first time; and I doubt not, but if you give your self the trouble of making it again, it will not fail of succeding.

As for those warm Particles that you say are often predominant in the Blood, I must confess I don't understand what you mean by them: the Blood, while we are in health, is always warm, the reason of which I have before given. If we have a Fever, the Blood excedes its natural Temper, according as that is more or less violent. Now the cause of this Excess of Heat in a febril state I take to be as follows: In most Fevers, especially in the beginning of 'em, there is a Constipation of some of the Emunctories; so that the excrementitious Alkaly that should be carried off by them, is detain'd in the Blood, which by breaking its Globules, and dividing the sulphureous Particles, which are the *Pabulum* of the vital Flame, dos either excite what we call a *Fermentation*, or rather by dividing the sulphureous Particles, and subduing the Acid

that held them together, increaſes the Flame to an intenſe degree. An Inſtance of which we have in common Fire, as I have elſwhere taken notice, and ſhall here repeat, *viz.* Let the matter of which Fire is made be laid cloſe together, and then kindled, and it will conſume leiſurely and by degrees; wheras let the parts be laid at ſome little diſtance one from another, and they will conſume with a rapid and intenſe Flame. *Salt-Petre* alſo and *Brimſtone* mixt together, will burn with a gentle and eaſy Flame; but by adding a proportion of Charcoal-duſt (as in making Gunpouder) in which is contain'd the fixt Alkaly of the Wood, this Alkaly, by cauſing a diviſion of the Particles of the Nitre and Sulphur, ſo alters the property of it, that inſtead of burning placidly and eaſily, the leaſt ſpark of Fire falling into it, will cauſe an Exploſion, that is, make it take fire all at once, and ſo be conſum'd as 'twere in an inſtant. Are not the Attacks of ſome Fevers and other acute Diſtempers very like this Exploſion, wherein Nature ſeems to be overthrown, and the whole Courſe of it diſorder'd almoſt in an inſtant? This at preſent is all I think neceſſary to obſerve concerning the warm Particles you ſpeak of; and that Acids are the only Medicins to ſuppreſs this unnatural Heat, I think I have already made appear. As for the Inferences you are pleas'd to draw from them, I think I have nothing more to do than ſlightly to touch at 'em,

'em, they having already fallen under my consideration: And I have sufficiently demonstrated that Alkalies are the Causes of all preternatural Heats in our Bodies.

But supposing preternatural Heats occasion'd by the superabundance of Alkalies in the Blood, you still seem to be dissatisfied about them also: 'For, say you, if they are fixt ones, 'how comes it to pass that on the dissolution 'of the Texture of the Blood, they claim the 'highest place, and nothing will serve their 'turn but they must needs swim in the Serum? 'If volatil, how is it that we oftentimes find 'this warm Serum little better than insipid? 'Volatil Salts you know are aculeated, and 'affect the Palat strongly. May they not ra'ther be of a sulphureous nature, since 'tis the 'nature of such Substances to sit uppermost on 'the dissolution of Bodies?

First, I don't remember I any where said that fixt Alkalies do claim the highest place in the dissolution of Bodies, and that they swim uppermost in the Liquors in which they are dissolv'd: But this I believe you infer from my Experiment with the *Serum*, which is the lightest part of the Blood, and therfore is uppermost in the Porringer after it has stood some time, and a Separation is made in the parts therof. Now I did not make use of the Experiment with the Serum and Syrup of Violets, to intimat that Serum only was over-impregnated with Alkalious Particles; but

that being the moſt colorleſs part of the Blood, was therfore moſt proper for ſuch an Experiment: For ſhould I have made this Experiment with the fibrous and globulous parts of the Blood, which are combined together in one maſs, they are ſo imbued with a Scarlet Dye, that a ſmall quantity of it would tinge a great quantity of Solution of Syrup of Violets with the ſame Color, tho at the ſame time it were greatly overcharged with Alkalious particles. Therfore in my plain and eaſy way of analyzing the Blood, I made uſe of it altogether as it came out of the Veins. But if a man conſiders with what Rapidity the Blood moves along the Veſſels, 'tis impoſſible but all the parts muſt be ſo mixt together, that if the Serum be overcharged with Alkalious particles, the other parts muſt be ſo alſo; or if the other parts be overcharged, the Serum muſt in like manner be ſo. But however, as for fixt Alkaſies, the Blood is very rarely overcharged with them, the Subſtances we take in for our nouriſhment affording very little of 'em after burning; and therfore Nature has provided but one Emunctory for the carrying them off, *viz.* the *Ductus Biliaris*, which empties it ſelf into the *Duodenum*, and is conveyed off along with the Excrement of our Food by ſtool: Wheras there are Millions of Emunctories, beſides that great Diſcharge made by Urin, to carry off the volatil Alkaly. But if at any time the Glands of the Liver are

ſo

so obstructed, that the fixt Alkaly cannot be separated from the Blood, what fatal Effects dos it produce?

I scarce ever knew a true *Ascites* (which is that kind of Dropsy that is very rarely to be cur'd) which has not had its Origin from an Obstruction of those Vessels in the Liver that separat the Bile from the Blood. Nay, frequently they have a Jaundice upon them thro the whole Course of the Distemper. But if not so, yet I never knew an *Ascites* that had not a Jaundice preceded it; and in what manner the whole Oeconomy of the Body is destroy'd in this Distemper, is but too well known. But this is not the only Distemper that has its origin from the obstruction of these Vessels, tho it be one of the most dangerous.

[Since the publication of the first Edition of this Tract, after much serious consideration, I have at last pitch'd upon a Method by which I have cured some few inveterat Belly-Dropsies, which us'd to be accounted incurable by every body; and that none may fall a Victim to this dreadful Distemper, to whom I am capable of affording any relief, I shall presume to give an account of it in this place.

℞ *Sem. Urticæ unc. duas; Bardanæ, Fraxini, Apii, ana unc. unam; Baccar. Juniperi* ℥ i *ss. Aceti squillitici, Sp. Juniperi, ana* ℔ *unam. Digerantur leni calore in vase vitreo optimè clauso per horas* 24, *& coletur; colatura reservetur ad usum.*

The Dose of this Tincture is from two to three or four Spoonfuls; first in the Morning, and nothing to be taken afterwards for two hours at least. It will frequently work both by Vomit, Stool and Urin: nay, in general it promotes all the Secretions, which is principally to be regarded in this dismal Case, all the Secretions of the Body being generally spoiled, but principally that of the Kidnys: and if once we can but bring our Patients to make water freely, our greatest difficulty is overcome; which the continued use of this Medicin will frequently effect. But considering the Tone of the Parts of the Body is universally weakned, by reason of so great a load of excrementitious Matter lodg'd upon them, but more particularly the Liver, Caul, Guts, *&c.* which are the Parts contain'd within the Cavity of the Abdomen, it is altogether reasonable, that proper Corroboratives should at due intervals be given, that thereby we may keep the ground we gain by Evacuations: and therfore in the Afternoon I order the following Medicins, or somthing like them.

℞ *Salis Martis, Succini, ana* ʒ i. *Myrrhæ elect.* ʒ ij. *Macis, Nucis moscatæ, ana* ʒ ss. *Conf. Absinthii Romani* ʒ iij. *Syr. e Prassio q. s. f. Elect. in sex bolos distrib. sumat. unum sing. diebus horâ quintâ pomeridianâ, superbibendo* ʒ iv. *Vini Medicati sequentis.*

℞

℞ *Cardamomi, Cubeb. Galangæ, ana* ʒ i. *Fol. Marrubii albi, Absinth. Roman. Centaurii, ana p.* iij. *sem. Urticæ* ʒ i. *Vini albi, vel Rhenani* ℔ ij. *Infunde clausè & calidè per horas tres, & coletur; colatura reservetur ad usum.*

℞ *Sp. Salis Dul. vel nitri Dul.* ʒ *ss. sumat gut.* x. *vel* xv. *in omni hauſt. potus.*

I have scarce seen one Person opened, that has died of a Belly Dropsy, whose Caul has not bin either perfectly rotten or full of œdematous Tumors; and therfore to prevent Accidents of that nature (for after the Caul has once begun to mortify, I am afraid all Attempts will prove fruitless) I order the whole Abdomen to be well fomented morning and evening with the following Fomentation, applying afterwards a double Flannen well impregnated with Oil of Juniper.

℞ *Flor. Chamomillæ, Lavendulæ, ana m.* ij. *Fol. Absinthii Rom. Rutæ, ana m.* i. *Sem. Urticæ* ʒ ij. *Calami Aromat.* ʒ iv. *Aceti Acerrimi* ℔iiij. *Spirit. Vini Com.* ℔ ij. *Infunde clausè & calidè in Vase terreo Vitriato optimè clauso per horas quatuor, & coletur; colatura reservetur ad usum.*

People

People under these Circumstances are generally thirsty to the last degree, occasioned by the great redundancy of Bile: but considering the Secretions are all spoil'd, and that the taking in of Fluids, when there is no passage to discharge their superfluous parts, is only to exasperat the Malady; therfore they ought to be kept from Drink as much as may be: and *Helmont* says that he knew one cured of a deplorable Belly-Dropsy by a total Abstinence from all manner of Liquors. Yet considering the intensness of the Thirst that generally attends them, I think it the greatest Cruelty imaginable totally to debar them from the use of that which they so urgently desire; and since they must have Drink, they ought to have such as may be little or no way prejudicial to them; nay, if possible, what may be of use and advantage to them. Malt Drink of all sorts they must abstain from as Poison; and by the way, more Ale-sellers die of this Distemper than of any other Trade or Profession. The best Wine is either White-wine, Old Hock, or any of the Diuretic Wines; but the sweet and clogging Wines are altogether pernicious. But instead of Wine, I would recommend such an *Apozem* as that which follows.

℞ *Rad. Graminis, Asparagi, ana* ℥ i. *ss. Sem. Urticæ* ℥ vi. *Tartari Rhenani* ℥ *ss. Aq. Font.* ℔ iij. *coque ad tertiæ partis consumtionem, & coletur; colaturæ adde Vini Albi vel Rhenani*

Rhenani ℔ i. *M. f. Apozema, sumat pro potu ordinario.*

If there be a prostration of the Appetite, I then prescribe the following Tincture, half a spoonful of which to be taken half an hour before dinner in a Glass of White Wine or Old Hock.

℞ *Sp. Hieræ Picræ* ʒ i. *Croci Ang.* ϑ ii. *Calami Aromat.* ʒ iij. *Aq. Gent. Comp.* ʒ vi. *Digerantur leni calore per horas quatuor; postea decanta Tinct. claram, cui adde Tinct. Martis Mynsicthi* ʒ i. *M.*

If a Cough attends them, which generally it dos, the following Lambative is as proper a thing as they can take.

℞ *Syr. Aceti, è quinque Radicibus, anâ* ʒ i. *ss. Sacch. Penid.* ʒ i. *M. f. Lambativum, sumat Cochleare unum frequenter, præcipuè urgente tussi.*

As for their Food, they may eat any thing their Stomachs crave, unless it be Milk and Milk-meats: As Sauce with their Food, they may eat Oranges and Lemmons as plentifully as they please.

I could expatiat largely upon this Subject; which should I do as amply as the thing requires, it would be fitter for a particular Tract

Tract of it self, than to be inserted here. But if what I have now said be taken in good part, as occasion offers it self, I may hereafter say more.]

Secondly, As for what you say concerning the Insipidness of the Taste of the warm Serum, I suppose you mean that Serum which is overheated in Fevers, *&c.* the Serum being always warm while People are alive. I can assure you it is contrary to my long Experience; for it has bin my custom many years to taste the Serum of the Blood not only in Fevers, but all other Distempers, where I have had occasion to prescribe Blood-letting; and in some Fevers I have found the volatil Salt to bite my Tongue severely, but never once could find the Serum insipid: and by this way of tasting I can better judg of the Condition of my Patient than from the Color of the Blood. But in those cases where the Serum is much inviscated, as in most Pleurisies, Rheumatisms, and many Fevers, the Volatil Alkaly is so involved, that it affects not the Taste very strongly, tho it is never insipid that I could yet find. As for volatil Salts being aculeated, and affecting the Palat strongly, I am glad you take notice of it, since the general Notion that most people have of all Alkalies is, that they are of such a sweet, soft, mild nature, as to carry a sanative Virtue along with them wherever they go.

Thirdly,

Thirdly, I own that sulphureous Substances are wont to sit uppermost in the Dissolution of Bodies; and that the Blood is impregnated with such Substances, I am far from denying; but they appear in all respects to be equally distributed thro all its parts: but suppose they should sit uppermost here, and the Serum more impregnated with them than the globulous and fibrous parts of the Blood, sulphureous Substances won't change Syrup of Violets from blue to green; and the Serum abounding with those Particles that will do so, which are Alkalies, these Alkalious Particles by breaking and dividing the Particles of the Sulphur will increase and excite the Flame I have before taken notice of, to a more intense degree: For the Serum would not be the more hot, supposing it did abound with sulphureous Particles, unless the said Particles were some way or other inkindled.

Letter. 'But thirdly, if Alkalies are the 'Original of all Distempers, whence is it that 'in Dropsies, Catarrhs, some Gouts, and o-'ther Distempers, we find the Texture of the 'Blood so thin? 'Tis observable that those Par-'ticles you term Alkalies, the more the Blood 'is saturated with 'em, the more thick con-'sistence it is of, as we see in Pleurisies, Rheu-'matisms, and other inflammatory Cases (in 'which Distempers, if in any, these Alkalies a-'bound) Is not then its Tenuity rather to be im-

'puted

'puted to Acids? Do not Acids immediatly 'put the Blood in a Fusion, and render it thin?

Answ. In most inflammatory Cases, where the Blood is immediatly affected, the Serum is viscous and fizy, being overcharg'd with Alkalious Particles; but in those Cases you mention, and in some others, where the Blood is over thin, it is not the over-thinness of the Blood that is the only cause of those Diseases, but a destruction of the Tone of the Parts; and where the Tone of any Part is once spoiled, the great quantity of excrementitious Matter is soon thrown thence, *viz.* from the Blood upon the weakned parts; and so the Violence of the Malady is increased. Besides, in Dropsies they being always thirsty, the quantity of Fluid taken in is so disproportionat to what is carried off, because they always make water but in small quantities in proportion to what they drink, that it's no marvel their Blood is over thin. I have frequently in Dropsies known people drink three Quarts in a day, when they have not pissed a Pint, nay not four Ounces. And that Acids should occasion the Thirst attending Hydropical people, is ridiculous to imagin, when they are the only things that will quench Thirst. Besides, do but consider the nature of the Medicins that are most effectual to bring the Blood to a consistence when it is over thin; I have scarcely ever met with any thing

thing equal to *Chalibeats*, and that *Steel* is an Acid I have elsewhere indeavored to prove: And as a farther proof of it I shall produce the Testimony of *Beckerus* (no contemptible man) in his *Minera Arenaria*, pag. 88. *Non recensebo jam qualiter ille spiritus esurinus in aquis subterraneis latitans, varia sibi Salium, Aluminum, Vitriolorum, Sulphurum, Realgarium mineralium compositionum species producat; nec demonstrabo, quâ ratione supra terram in Aeris regione tractus quidam hujus Acidi spiritus de uno Polo ad alterum, & perillum acus Magnetica feratur. Hoc tantum hic loci allegabo, omne Acidum substantiæ martialis esse, in quocunque oleo, pinguedine, fuligine, limo, silice & arena; imo etiam ipsa flamma reperibile, ac ad oculum demonstrari posse: quæcunque ergo naturæ Acidæ & martialis sunt, illa potestatem habent Alkali tanquam substantiam metallorum mercurialem alterandi & transmutandi.* Now if this Thinness of the Blood may be taken off, and the Blood brought to its due consistence by means of Acids, 'tis not reasonable to suppose Acids the cause of its fusion. But then I confess here lies a great Difficulty, *viz.* how is it possible for Acids to make the Blood thin when 'tis too thick and viscous, and to bring it to a due consistence when it is over fluid? To which I answer, That should I pretend to give an account what Acids taken in the proper latitude would do, I should be guilty of the greatest Arrogance imaginable; for that would

would be to pretend to as much Knowlege as *Solomon* had, who knew the Virtues of Plants from the Cedar of *Lebanon* to the Hyſop that grows on the Wall. And Divine Providence had determin'd him to be the wiſeſt of Men that ever ſhould be. All Plants from the greateſt to the ſmalleſt are principally compoſed of Acido-ſulphureous Particles; for what compariſon is there between the ſmall quantity of fixt Alkaly found in the Aſhes after burning, and of volatil Alkaly in the Soot, in relation to the great quantity of Acido-ſulphureous matter ſpent in Flame? Or to come nearer to the matter; let a Pound of any Vegetable, which affords the greateſt quantity of fixt Alkaly, viz. *Broom*, or any ſuch Plant, be ſufficiently dried, ſo that the ſuperfluous Humidity may be evaporated; after that, let it be committed to diſtillation *per ſe*, and it will afford between two and three Ounces of an Acid Spirit, with a good quantity of Oil, when all the Art of Man is not able to procure from the *Caput Mortuum* above two Drams of fixt Alkaly; yet, as before obſerved, Broom is one of thoſe Plants that affords the largeſt quantity of fixt Alkaly. Now the Acid Spirit and Oil are thoſe Subſtances, which in burning ſerve to ſupply the Flame: and from the *Caput Mortuum*, unleſs it be afterwards burnt, there is no fixt Alkaly to be obtain'd.

But here again, to obviat the Objection before taken notice of, *viz.* That Fire may produce

duce new Substances not existent in Bodies before; or, for instance, the fixt Alkaly to be produced out of the Ashes of the *Caput mortuum* of the Broom, is only the Product of the Fire: If this were so, then the Ashes after all the Salt is once extracted, being again committed to a violent Fire, must produce more Salt; wheras on the contrary let it be committed to the Fire in the most violent degree of heat, and continued there as long as you will, it will never after afford the least quantity of Salt of any kind.

But that I may return to answer the former Objection, *viz.* how Acids are capable of making the Blood thin when over viscous, and of reducing it to its consistency when it is over thin. All the Bodies in Nature are differently specificated by the all-wise Author of Nature, and at the same time are all animated by one universal Acid Spirit, which the Antients were wont to call *the Soul of the World*, and I think not improperly. Now the more any Bodies are impregnated with this universal *Acid* Spirit, and its beloved Sister *Sulphur*, the more perfect they are; and Gold, which is one of the most perfect and durable Bodies in Nature, seems to be composed of nothing but a pure *Acidum* and *Sulphur*, as I think has bin sufficiently made appear by some of the most strict Inquirers into Nature's Secrets. [One instance of which I shall here produce, *viz.* that all the fulminat-

ing Compositions we know of are composed of *Acidum*, *Sulphur*, and a due proportion of Alkaly: Now *Aurum fulminans* being the most extraordinary fulminating Substance to be met with, is only Gold dissolv'd in an Acid, and precipitated with an Alkaly; so that the Gold must supply the room of a Sulphur at least; and without a Sulphur, no man that ever I yet heard of, did pretend to make any sort of fulminating Pouder: and one Grain of this fulminating Gold here taken notice of, will do more than a hundred of any fulminating Pouder besides. And the other Ingredients being the same that are used in composing the common fulminating Pouders, and this so much out-doing them, is, I think, a plain Argument that Gold is a Sulphur, nay the most extraordinary one in Nature.] Now the more perfect any Bodies are, the more *Acidum* and *Sulphur* they contain, and afford the least quantity of Excrement, *viz.* Alkaly, which is the only Destroyer of all Bodies, and brings them to a state of Putrefaction and Corruption.

Well, but some will say, what's this to the answering of the Objection twice started? Why it's only to make my way clear: But I shall now apply my self to it. There are two general sorts of Acids, viz. *manifest* and *invelop'd* ones: the manifest ones are such as immediatly appear to the Taste; and these, tho originally the same, and proceding from the

the same universal Fountain, yet have different Operations upon Human Bodies. The invelop'd ones are such as are not immediatly perceiv'd by the Taste, but by taking the Bodies asunder appear to be such. There is an Axiom, that *Unumquodque in id dissolvitur unde compactum est:* Every thing is dissolved into that of which it is made. Now if this Axiom be true, as I think it is infallible, a man may reasonably conclude that those Bodies, which upon their dissolution are reduced into Acid Substances, are Acids, tho before their dissolution they did not appear to be so. Most Vegetables upon their dissolution, or being analyz'd by the Fire, appear principally to be composed of Acid Substances; and therfore I think are to be accounted Acids, tho they are so differently specificated, and have such different Operations upon Human Bodies, that a Man who has not nicely examin'd them, would be tempted to believe their original constituent Parts much more different than they are. Now the more perfect and durable any Vegetable is, the greater quantity of *Acidum* and *Sulphur* it affords, and less of excrementitious Alkaly. And from the different Combinations of the two Sisters *Acidum* and *Sulphur*, I believe it possible to give a very probable Account of all the differences in Plants, as to *Color*, *Tast*, &c. And as these two *perfect* (if it may be lawful to call any natural thing perfect) Principles are more or

less clog'd with excrementitious Alkaly, so they are more or less durable as to themselves, and friendly to Human Bodies, for whose use they were chiefly created. Therfore you see, when I preach up Acids, it is not only *Vinegar*, *Lemons*, *Oil of Vitriol*, *Oil of Sulphur*, &c. that I recommend, but all the perfect parts of the Creation, and that I decry the use of such things as are the Principles of Death and Destruction in Bodies, viz. *Alkalies*. From what I have said I think I may without presumption reckon *Oak-Bark* among the number of Acids; and yet being given in Substance, or a Decoction of it, it is so far from making the Juices over fluid or thin, that it will reduce them to a Consistence, when they are so. The same may be said of *Bistort*, *Tormentil*, and abundance of things of that Tribe: the same thing will *Comfry Roots* do, and all the things of that Tribe; the same I could say of many more, but I have not room to expatiat. *Asparagus*, *Parsly*, &c. will make the Juices fluid when they are over thick and viscous, and so will a multitude of things more of that Tribe. I could lanch out into the Mineral Kingdom, but the different Operations of 'em are so well known, that I think it needless to take any particular notice of 'em: yet this much I will say, tho foren to my present Design, that after having made all the Inquiry into the Nature of Metals of which Human Industry is capable, I am well satisfied they differ only in

degrees

degrees of Purity; and therfore for ought I know the busines of *Transmutation* is not so ridiculous a thing as some would make it. As to those Acids that are manifestly so, they greatly differ in their Operations upon Human Bodies. I have before observed that there are those which may properly be called *Acido-sulphurea*, and others *Sulphureo-acida*: but in Nature I don't know a simple Acid or a simple Sulphur, there being such an indestructible Bond of Union and Friendship between them, that they are never one without the other. Now those Acids that have most Sulphur united with them are *Aperitives*, Openers of Obstructions, and keep the Blood and Juices in a proper state of Fluidity: Those that have little Sulphur mix'd with them are *Stiptics*, and bring the Blood and Juices to a consistence when they are over fluid. What I have said upon this Subject is not the effect of Fancy, but of a Series of several Years strict and nice Observations.

Letter. 'Besides, if Alkalies did always of-
'fend and cause Pain, it must follow that Acids
'must give ease: But I assure you I have often
'experienced the contrary; for upon the ex-
'hibition of *Rhenish*, *White-Wine*, and other
'Acids, I have found the Pains immediatly
'exasperated, and many times it has bin a
'long while e'er they went off.

Answer. If Alkalies cause Pain, I agree with you, that Acids of consequence must give ease; but I don't suppose an ill habit of Body that has bin some months or years a contracting, is to be alter'd with a few Doses of the most exalted Medicin in the World, let it be Acid, or what you please. Yet supposing Acids the most proper Medicins to ease Pain, as I believe they are; it is not improbable, but upon the giving a small quantity of Acid when there is a large quantity of Alkaly lodg'd upon any part so as to cause Pain, it may only in part dissolve the Alkaly, which was before more fixt, and by accident exasperat the Pain; wheras by continuing the use of the Acid, the Alkaly would be perfectly dissolv'd and extirpated, and the Pain altogether vanish. But Pain being somtimes exasperated upon the first giving of Acids in too small quantities, has, I doubt not, bin one great cause of deterring people from proceding in the use of 'em, and also of attributing to them the cause of Pain. But in great Pains it is my constant practice to apply Acids externally to the Part affected, as well as inwardly; and there are but few Pains, especially Gouty and Rheumatic ones, that I am not able to overcome in a small time. And for the Pain you say you have often found to be excited upon giving *Rhenish* and *White-wine*, I have assign'd a reason for that, if they are drunk in too large quantities, both

in my *Essay of Alkaly and Acid*, and in my *Tract of the Gout*; and therfore shall not repeat it, but refer you thither.

Letter. 'Again, if the Gout procedes from 'an Alkaly, what is the reason you use so 'much *Sassafras* in its Cure? Is *Sassafras* an 'Acid, and so proper to subdue this Al-'kaly?

Answer. I can cure the Gout, if there were no such thing as *Sassafras*; which I only use in Apozems, as a proper Vehicle to dilute other Medicins in the Stomach. But however, *Sassafras* is no contemptible Medicin; and should you give your self the trouble of distilling a Pound or two of it in a Retort *per se*, if you afterwards reckon it among the number of Alkalies, I am mistaken; and if so, I shall willingly own it.

Letter. 'I have only a word or two to speak 'concerning the green Color of Syrup of Vio-'lets, and so I have done. I believe it may be 'turned green without an Alkaly: On the 'exhibition of it to Infants it comes away 'green very often, and brings away a great 'deal of green Matter by stool; and yet I 'believe they do not abound with Alkalies.

Answer. I own that upon the exhibition of Syrup of Violets to Infants it will often occa-

sion green Stools: But whence dos that procede, but from its mixture with the Bile in the small Guts? and that the *Bile* is an Alkaly I know no man that doubts.

Letter. 'You may read in a late Author of 'undoubted Credit, that upon an Infant's 'swallowing a Dose of testaceous Pouder, an 'extraordinary Ferment was raised in the Sto-'mach of the Child: Now how could this 'Ferment be raised, if it had not an Acid to 'work upon? Besides, dos not Experience 'shew that nothing is so proper in Infants 'Distempers as Alkalies?

Answer. The Author you speak of is my singular good Friend, for whom I have a very great Value and Esteem; and as to the Truth of the Relation you mention, I readily assent to it: But if you have read the *Appendix* to my *Essay of Alkaly and Acid*, you cannot but remember that I there acknowlege Acids may somtimes abound in the Stomach, and cause a Disorder, but in no other part of the Body; which thing I have so fully handled, that should I recite what I have there said, my Enemies would accuse me of Tautology, and therfore thither I shall refer you: and if what I have there said be not sufficient, I shall indeavor to give you what further Satisfaction I can. As for the Cure of Infants Diseases, I don't see but they require the same Methods

as are taken with grown People, only the Medicins given must be more mild and gentle, and in less quantities, considering the great Tenderness of their Natures.

Letter. 'I have some more things to offer; 'but I desire you would be pleas'd to satisfy 'me as to these. I should be glad to close with 'your Opinion, and imbrace any thing that 'is new; for I believe *Medicin*, tho it has met 'with great Improvements of late, to be ca- 'pable of far greater. I'll give you no far- 'ther trouble, only after thanks to you for 'your indefatigable Labor in searching out the 'Truth of things, subscribe

Your humble Servant,

F. T.

Answer. I have indeavored to give you what satisfaction I am able as to the Objections you have already rais'd, and shall think no labor too much to answer any farther Objections. I desire no man to consent to any thing that comes from me, without examining it in the Balances of Reason and Experience; and if after such Examination, you find what I have advanc'd to be Truth, I don't doubt but to find you a zealous Champion in my Cause: But if otherwise, I desire you will con-

convince me of my Errors, and I shall be very ready to make a Recantation. As for the Improvements made of late, they have principally belong'd to *Anatomy*, and indeed they have bin very considerable; and of all the Physicians of *Europe*, those of our own Nation have had the greatest hand in them. But for the Improvements in the practical part of *Physic* (setting aside the Discovery of the use of the *Peruvian* Bark in the cure of Agues) they are very inconsiderable: The most that has bin done of that kind, was by the indefatigably industrious Dr. *Sydenham*, and I heartily wish we had more Dr. *Sydenhams* at this day.

Sir, there are abundance of Imperfections that you will meet with; but if you did but know the great hurry I have bin in, and how little time I have had to sit composedly in my Study, you would readily pardon a great many of them: Yet this I can assure you, that had I not had an earnest desire to serve you with some other such Candid, Ingenuous Persons, I would not have lost so many hours sleep (having little other time to command) as I have bin forc'd to do, to put things in that order they are: At present I have nothing more to add, but that I am

Yours to Command,

JOHN COLBATCH.

The

The CASE of EDMUND TURNER *Esq.*

ON Monday *Aug.* 30. about twelve a Clock at night, Madam *Turner* came and told me that Mr. *Turner* was very ill at my Lord *Wharton*'s at *Winchington*, and desired me, that I would immediatly get my self ready, and go down to take care of him; which accordingly I did, and got to *Winchington* the next day by one a Clock. When I came, I found Dr. *Fry* of *Oxford* had bin there some time, and was then at Dinner; so I went up to Mr. *Turner* to inform my self as nicely as I could of his Case; after which I came down to Dinner, which being over, I desir'd the Doctor we might consult what was proper to be done for the distressed Gentleman. But before I take notice of what passed between us, I shall exactly relate the Case, with the occasion of his Illness.

On the Saturday night before, Mr. *Turner*, with two other Gentlemen, sat down to drink, and continued at it till seven or eight next morning (tho I cannot learn that the Quantities they drank were extraordinary) at which time they all went to bed: the other two Gentlemen lay in bed the whole day, and ate nothing

nothing but Water-gruel; but Mr. *Turner* got up in the Afternoon, and ate boil'd Mutton, with a great deal of strong Broth with Mushrooms in it, and drank plentifully both of Wine and prodigious strong Beer, and then went to bed again, and presently fell asleep; but early next morning he awaked in the most dreadful condition imaginable. When I came to him, his Circumstances were as follow.

He had a violent Pleurisy, and *Peripneumony* upon him, as was plainly to be perceived by a most sharp Pain in his left side, of which he greatly complained, and a prodigious Shortness of Breath. He also complained of a great *Nausea* and Sickness at his Stomach, and had a very high Fever, with a great Stupor and Dulness in his Head.

Dr. *Fry* had, some hours before I came, sent a Prescription to Mr. *Williams* an Apothecary at *Ailsbury*, of which I have here inserted an exact Copy.

For Mr. *Turner*, *August* 31. 1697.

℞ *Ol. sem. Lin. rec. (sine igne) extract.* ℔ *semis.*

Sig. The Oil.

℞ *Syr. Balsam. Tolat. unc. quatuor.*

Sig. the Balsamic Syrup.

℞

℞ *Antimonii Diaphoret. Corallii Rub.* pp. *Margarit.* pp. *ana dracm. duas. M. f. pul. in Chart.* 12 *equal. reponend.*

Sig. the Pearl Pouders.

℞. *Aq. Hyssopi, Cichorei, ana unc. sex; Limacum mag. Lumbricor. mag. ana unc. unam sem. Cinnamom. Hord. unc. unam; Syr. Capillor. Ven. Violar. ana dracm. sex. M. f. Julap.*

Sig. the Julap.

℞ *Emp. de Cicut. cum Ammon. unc. duas;*

℞ *Sem. Cumin. pul. unc. semis.*

Dr. Fry.

He had also, about an hour before I came, taken away about seven Ounces of Blood, the same quantity having bin taken away (as I am informed) the day before by order of Dr. *Wilson*, a Physician of the Neighborhood. I told Dr. *Fry* I could not in conscience agree to the use of the Medicins he prescrib'd. The *Nausea* at his Stomach was so great, that I fear'd the Linseed Oil would increase it to such a degree as would be of ill consequence; and for the testaceous Pouders, *&c.* they would excite the Hurry and Disorder in his Blood to a greater degree, and increase the In-

Inflammation of his Lungs, and I fear'd inevitably ruin him. He askt me what Method I would propose? To which I replied, that in my opinion, according to the laudable Custom of the great Dr. *Cole*, he ought to lose at least twenty Ounces of Blood more, which would empty the Vessels, and make room for the Blood to circulat thro the Lungs: That at due Intervals he should take a moderat quantity of *Tartarum Vitriolatum* and *Cremor Tartari*, in a spoonful of Syrup of Vinegar, drinking afterwards a large Draught of Pectoral Decoction, which would take off the *Nausea* at his Stomach, and promote Expectoration, and perhaps gently carry off the undigested Matter, which lay in his Stomach, by Stool: That he should be allow'd moderatly cooling Liquors as oft as he desir'd them, in every Draught of which he might take about ten drops of dulcified Spirit of Nitre, which might help to take off the Inflammation of his Lungs, and calm his Blood: That he should take a Spoonful of a mixture of Pectoral Syrups often, in which was contain'd a convenient quantity of *Oximel* of *Squills*, which greatly promotes Expectoration. To take off the Stupor and Dulness in his Head, I proposed a Cataplasm of Mustard, Horse-Radish Roots, Rue, and Castor, to be applied to the Bottoms of his Feet.

To none of these things would the Doctor comply, neither could I comply with his Methods;

Methods; so after many long Debates, we at last agreed to go up separatly to Mr. *Turner*, and acquaint him, that we could not agree, and that he must discharge one of us. Dr. *Fry* went first, and when he came down I went up; but for fear that things might be misrepresented, I would not go up, unless Mr. *Wats* (a man eminently known in this City) would go with me to hear what I said. Mr. *Wats* was at first unwilling, but at last consented. When I came up to Mr. *Turner*, I told him Dr. *Fry* and I could not agree, and therfore one of us must be discharged. I likewise told him I had sufficient reason to believe the Method I had proposed for him might retrieve him, but that Dr. *Fry* was more positive as to the success of his than I would be of any Method I could use in a much less dangerous Case than his, and therfore I thought it his most prudent Method to continue him: To which he made me no Answer, but desired me to go down again, and see if we could not find a Method of Reconciliation, or words to that purpose. Upon which I went down, and told the Doctor what he said. After a farther Debate, without any compliance on either side, we agreed to get Mr. *Wats* to go up and know who must be discharged: when Mr. *Wats* came down, he brought us word that Mr. *Turner* desired to speak with us both together; accordingly we went up, and when he saw us he desired we would not stand upon

any

any little Punctilios, and beg'd of us to give him a Vomit, because after a Surfeit he was wont to take one, and it always reliev'd him. I readily consented to it, and proposed *Oximel* of *Squills*, with large quantities of Posset-drink (as Mr. *Wats* may well remember) and if that did not work, to excite it with Salt of *Vitriol*: But to this neither would Dr. *Fry* agree, but closely urged the use of the Medicins he had prescribed, upon which Mr. *Turner* assented to take them. I staid all that Afternoon and the Night following, but had no hand in any thing that was done. I went up with Dr. *Fry* about six a Clock to see how he did, when his Pulse seem'd to be somwhat mended, it having bin extremely bad before. About ten (just before I went to bed) I went up again with the Doctor to see how he was, but then I found a most lamentable Pulse, there being nothing but a little trembling Motion to be felt; upon which I desired the Doctor to walk out of the Room a little, when I told him that things lookt very ill, for that his Fever was extremely high, his Breath very short, and his Pulse as before related, and that if he did not mend that Pulse, he would drop his Patient. His answer was, that all was well enough: upon which I had nothing more to say, he not being my Patient. Next morning about seven a Clock I went again to see him, and found him much after the same manner he had bin the Night before, but the Doctor told

told me he hop'd all would be well; so I went to Breakfast; and while I was at Breakfast, I told one of my Lord *Wharton*'s Servants (to the best of my remembrance it was the Butler) what my apprehensions of Mr. *Turner* were, and that I saw no hopes of his Recovery. But Mr. *Turner* being solely under Dr. *Fry*'s Care, I did not think fit to stay any longer to neglect my Patients in *London*, and do him no other service than to go up now and then, and look at him: so away I came without taking my leave of him; but before I went, I desir'd the forementioned Servant, if Mr. *Turner* should inquire after me, and know I was gon, to acquaint him that I was unwilling to take my leave for fear of disturbing him. Of all that passed between the Servant and me, Mr. *Turner*'s own Son was a Witness, and was much concern'd that his Father was not under my Care. As I was coming home, about six miles on this side *Ailsbury* I met Col. *Cornwel* going to see Mr. *Turner*, who sent his Man to me to inquire how he was. I made answer, that I hop'd he was somwhat better, fearing if I had told him my real Sentiments, he would have pressed me to go back with him; and as things stood, I did not care to return. By that time I had come about six miles farther, I met Madam *Turner*, to whom when she askt me how Mr. *Turner* did, upon the same considerations I made the same reply I had done to Col. *Cornwel*. After I was gon,

Dr. *Fry* prescribed more Linseed Oil, and a Pearl Cordial.

About eight a Clock at Night, being Wednesday, I came home, and after I had made two or three Visits, and eat my Supper, I went to bed. I had not bin in bed half an hour, before Col. *Cornwel*'s Man knockt at the door, and desir'd to speak with me; he told me Mr. *Turner* was much worse than when I left him, that Dr. *Fry* was discharg'd, and he beg'd me to come down again to him; for that he would take nothing more from any one, but what I should direct. Upon which I got a Calash and four Horses as soon as I could, and went down again. I came to *Winchington* on Thursday about twelve a Clock, and found the poor Gentleman in the most profuse Sweat imaginable, his Breath short to the last degree, and almost no Pulse at all: But the Pain in his Side was gon, which his Lady (who was then with him) and those about him took for a good Sign. But I told them that his Shortness of Breath continuing, and his Pulse being so very low, it was rather a bad one, and that he was in a most deplorable condition; and I appeal to every one of my Lord *Wharton*'s Family, who askt me how he did, whether I once gave them the least Incouragement to believe he would recover. The Shirt he had on him was as wet as if dipt in a River, and as cold as Ice, and so were both the Sheets; therfore the first thing I did was

was to free him from this cold wet Linen; in order to which I got as large a Fire made in the next Room as the Chimny would bear; I then set a Shirt and a pair of Sheets that had bin before used, to be well air'd and heated: in the mean time his Lady and her Maid with hot Napkins rubb'd him, and made him as dry as they could; after which with all the Caution imaginable, we put on a hot dry Shirt, and took away the cold wet Sheets, and put those that we had well heated and air'd in their room. This matter, just as I have related it, I can have sufficiently attested, tho it be positively said about Town, that I took him out of the Sweat, and put him on clean Linen without airing it at all. He being prodigiously thirsty, begg'd me to give him somthing that might allay it; upon which I ordered 'em to make him a Mixture of four parts small Beer, one part White-wine, and some Juice of Lemons to make it grateful, and to sweeten it with Loaf-sugar; and he being a great lover of Nutmeg, desired a little of it might be grated into it, which, considering the Stupidness in his Head, I agreed to. Of this Liquor I allowed him to drink as plentifully as he pleased; considering the Profuseness of the Sweats he had had, I durst not then venture to bleed him, tho his Fever was as violent as ever. But to the Apothecaries I prescribed as follows.

For Mr. *Turner* Sept. 2d, 1697.

℞ *Oximel. simp. unc. quatuor; Aq. Lactis unc. sex; Cinnamomi fort. dracm. sex. M. f. Mixtura, cap. cochleare unum frequenter.*

℞ *Oximel. Squillit. unc. duas.*
Sig. Oximel of Squills.

℞ *Crem. Tart. unc. sem. Tart. Vitriolat. dracm. unam; Sach. alb. unc. sem. M. f. pul. in sex chart. distrib. ex quibus cap. unam tertiâ quâque horâ in cochlear. Syr. Aceti, superbibendo haust. Apozematis sequentis.*

℞ *Fol. Hederæ terrest. Flor. Hypericon, ana M. unum; Rad. Altheæ unc. duas; Balsam. Tolutani dracm. unam; Aq. Font. ℔ tres: coquantur ad tertiæ partis consumt. & coletur; colaturæ adde Oximel. simp. unc. duas, Sp. Nitri dul. gut. 30. M.*

℞ *Sp. Nitri dul. dracm. duas.*
Sig. dulcified Spirit of Nitre.

I afterwards sent a second Prescription, which was as follows.

℞ *Sem. Psillii, Cydoniorum, ana unc. sem. ponantur in Chart. separatim.*

℞

℞ *Electuarii Lenitivi unc. duas, Crem. Tart. unc. sem. M. f. Elect.*

This last Electuary was for Mr. *Turner*'s Man, who had sat up several nights, and complain'd of a great inward Heat and Costiveness; but however, because it was inserted in a Bill with Mr. *Turner*'s Name to it, I thought it convenient to take notice of it; tho it is no Poison, and if Mr. *Turner* had taken it himself, it would not have murder'd him.

The forementioned things, with Directions, were taken as ordered; and as to those, for the use of which there was no Direction given, I shall here give an account how they were taken.

Once in about two hours I mixt half a spoonful of the *Oximel* of *Squils* in a small quantity of the Apozem, and gave it him. Of the dulcified Spirit of Nitre I gave him ten drops in almost every Draught of Liquor he drank. As for the *Flea-Bean* and Quince-seeds, I had one half of them boil'd in two Quarts of Water to the consumption of one half; and of this mulaginous Decoction I now and then gave him a good Draught, it being a great promoter of Expectoration. In the House I got made up a Lambative of fine Sallet Oil and Syrup of Vinegar, and of this I somtimes gave him a Spoonful. But all I could do avail'd nothing; I could by no artifice make him expectorat in

any quantity, only sometimes he would discharge a green putrid Matter. He continued to be short-breath'd to extremity, his Fever no whit abated, his Pulse low and irregular, and sometimes would totally intermit for two or three seconds, with a Stupidness in his Head.

About nine a Clock he again broke out into a most profuse Sweat, which I did by no means like, at which time I laid me down upon a Field Bed that was in the Room to sleep, choosing rather to lie so than go to bed, that I might be the more ready to be called upon occasion; but having travelled near sixscore miles in three days, and bin two nights upon the Road, I was very sleepy. About eleven a Clock my Lord *Wharton* called Madam *Turner* in the next Room to consult about sending for Dr. *Babo*; she left his Man sitting upon the Bed by him, I being fast asleep upon the Field Bed. While Madam *Tuaner* was in the next Room with my Lord *Wharton*, Mr. *Turner* in the midst of this profuse Sweat leaps out of the Bed, and walkt round it to the Close-stool without any thing but his Shirt upon him; Madam *Turner* hearing some body walk in the Room barefoot, run in to see what was the matter, and found him in this posture; she was immediatly followed by my Lord *Wharton* and some others: as soon as she came in, I awak'd, and got up to help him into the Bed. When he was put into Bed he laid himself

self in a Posture, out of which he never moved till he died, which was within a very few hours. Whether this last getting out of the Bed was a shortning of his Life, I cannot be positive, but it is very probable it might. It is to be observed that the Night before about eleven a Clock, he was in such extreme Agonies, that every body thought he would have died then, at which time his Nails turned bluish; but upon his recovering himself (which I believe was principally occasion'd by the sight of his Lady, who just then came into him) his Nails never recovered their Color, but continued bluish till he died. Now the Nails not returning to their Color was as fatal a Symptom as could be.

I am sorry I have bin forced to rake up the Ashes of the Dead; but I having so often bin charged with no less than the Murder of this Gentleman, I am forc'd to write the Case in my own vindication. I am sure it was as much my Interest to preserve Mr. *Turner* as any one Man in *England*, there not being one to whom I was more obliged than to him, who had done me many singular pieces of Service; and I am sure I would have gon as far, and done as much to have sav'd his Life, as any Man could have done for his Friend.

Before I conclude this Subject, I shall presume to take notice of a thing that happen'd, which was a kind of Preludium to his Death; and for ought I know the Thoughts of it might

deject his Spirits, and have a fatal Influence upon him.

About *April* last Mr. *Gadbury* came to him, and told him, *Mr.* Turner, *you will die in the Country this Summer of a Surfeit of Drinking.* He receiv'd it with a Smile, and said, *I die with Drinking, who am the sobereſt Man in* England! *that's impoſſible.* In *May* he went to the *Bath*, but before he went he made his Will, and was obſerved to be more melancholy than uſual. He came back from the *Bath* very well, and told ſome of his Friends that Mr. *Gadbury* was deceiv'd. Some time after he went to *Winchington*, and juſt as he was going, one of his Friends bid him remember what Mr. *Gadbury* had ſaid, and beware of drinking: he ſaid he would. As ſoon as he was taken ill (I ſuppoſe remembring Mr. *Gadbury*'s Words) he told his Son that he ſhould not recover.

[*Poſtſcript.* Whether Mr. *Gadbury* came to Mr. *Turner*, or Mr. *Turner* went to him in diſguiſe, which is moſt likely, I am not certain; but that Mr. *Turner* told ſeveral of his Friends that what I have related paſt, between him and Mr. *Gadbury*; and that every part of the Relation as to that matter, is true, I can produce ſeveral perſons of undoubted reputation to teſtify.]

CASE

CASE II.

July the 11*th* I was sent for to Mr. *Davis*, a Gentleman of a very considerable Estate near *Lynn* in *Norfolk*, who then lodged at *Chelsey*. He had a little before the Small Pox, and after that a malignant Fever, having bin under the Care of another Physician, who treated him after the common Method with Alkalies and Alexipharmics: but his Case was now so deplorable, that his Friends despair'd of his Recovery; so the former Physician was discharged, and I was sent for: when I came to him, I found his Case as follows. He had a violent *Peripneumony*, or Inflammation of his Lungs, his Breath being constantly very short; but at some times he was so extraordinarily short-breath'd, that his Friends were afraid he would be strangled. He had a Fever upon him to a most intense degree, a great Stupor and Dulness in his Head, a *Nausea* at his Stomach, and his Pulse very low and irregular, with a great Depression and Lowness of his Spirits. I prescribed for him to Mr. *Baxter*, an Apothecary in St. *Martins-lane*, as follows.

For

For Esq; *Davis, July* the 11*th* 97.

℞ *Cremor. Tartari dracm. tres; Salis Prunellæ dracm. duas; Ol. Cinnamomi gut. duas; Conf. Cynosbati un. unam; Syr. è Rubro Idæo q. s. f. Elect. cap. quant. nucis moscatæ largæ tertiâ quâque horâ, superbibendo haust. parvum Julap. sequentis.*

℞ *Aq. Cinnamomi Hord. Lactis Alex. ana unc. sex; Vini rub. Gal. unc. quatuor; Syr. è rubro Idæo unc. tres; Ol. Sulphur. per camp. gut.* XX. *M. f. Julap.*

℞ *Syrup. Aceti unc. tres; de Rosis sic. unc. unam. M. f. Mixtura cap. cochleare unum in omni difficultate respirationis.*

℞ *Aq. Cinnamomi Hord. unc. quatuor; Mirabilis, unc. unam semis; Syr. Garrioph. unc. semis; Conf. Alkermes scrup. duos. M. f. Card. cap. cochlearia quatuor vel quinque quando spiritus languent.*

Besides the forementioned things, I order'd him to eat Lemon and Sugar very often, and to drink Lemonade in as plentiful quantities as he pleased.

The next day I visited him again, and found him much after the same manner he was the day before, only his difficulty of breathing seem-

seemed to be somwhat abated; the Water he made in the Night was of a perfect Lead Color, and his Pulse was very low and irregular, and would somtimes totally intermit. The Blackness of his Water, and Irregularity of his Pulse made me very doubtful of his Recovery. I then prescribed the following Medicins.

℞ *Conf. Flor. Calendulæ, Lujulæ, ana dracm. sex; Conf. Alkermes dracm. unam; Ol. Cinnamomi gut. tres; Ol. Sulphur. per Campan. gut.* xv. *Syr. Lujulæ q. s. f. Elect. cap. quant. nucis moscatæ largæ quartâ quâque horâ, superbibendo haust. Julap. seq.*

℞ *Aq. Lactis Alex. Cinnam. Hord. ana unc. decem; Theriacalis unc. duas; Syr. Lujulæ unc. tres; Ol. Sulp. per Camp. gut.* xv. *M. f. Julap.*

℞ *Aq. Cinnamomi Hord. unc. sex; Mirabilis, Epidem. ana unc. unam; Syr. Garrioph. dracm. sex. M. f. Cardiacum, cap. cochlearia sex in languoribus.*

The 13*th* I visited him again; his Pulse continued low and irregular, his Urin very black, his Fever nothing abated, but he began to expectorat a little, at which I was well pleased. In the Night he was taken with a Loosness, which considering his long Illness before, he was not well able to bear. I prescribed as follows. ℞

℞ *Aq. Cinnamomi Hord. Germ. Querc. ana unc. quatuor; Epidem. unc. tres; Mirabilis unc. unam; Theriacalis dracm. sex; Conf. de Hiacyn. drac unam sem. Syr. Garrioph. dracm. sex. M. f. Julap. cap. cochlearia* iv. *vel* v. *frequenter.*

℞ *Lupulor. man. unum; Passular. Corinth. Salis Marini, ana unc. quatuor; Aceti acer. q. s. f. Cataplasma Carpis applicand.*

℞ *Rad. Petasitidis unc. tres, Angelicæ Hispan. unc. sem. Fol. Rutæ pug. duos; Aq. Font. lib. duas; Aceti acerrimi unc. sex. Infunde clausè & calidè in vase terreo vitreato per horas* iv. *& coletur, cap. unc.* iv. *quartâ quâque horâ.*

The 14*th* I visited him again; his Loosness was quite stop'd, he spit prodigiously, upon which his Shortness of Breath was almost totally gon; his Fever was greatly abated, and his Pulse extremely mended, and his Urin of a good Color, and well digested. I prescribed as follows, and also order'd him to take liberally of his Mixture with Syrup of Vinegar to promote his Spitting.

℞ *Aq. Lactis Alex. Cinnamomi Hord. ana unc. decem; Vini Rubri unc. sex; Syr. Lujulæ unc. tres; Ol. Sulphuris gut.* xvi. *M. f. Julap. cap. haust. larg. ad libitum.*

The

The 15*th*, 16*th*, and 17*th*, he continued to take the forementioned things, during which time he spit like one in a Salivation; but he continued very weak, and having something of his Fever lurking within him, the 18*th* I prescribed the following Medicins.

℞ *Conf. Calendulæ, Lujulæ, ana unc. semis; Conf. de Hiacyntho dracm. duas; Crem. Tart. dracm. tres; Ol. Cinnamomi gut. duas; Ol. Sulph. per Camp. gut.* xv. *Syr. Lujulæ q. s. f. Elect. cap. quant. nucis Castan. tertiâ quâque horâ, superbibendo haust. Apozematis sequentis.*

℞ *Rad. Eringii unc. duas; Aq. Hordei lib. tres; coquatur ad tertiæ partis consumtionem, & coletur; colaturæ lib. unam sem. addé Aq. Cinnamomi Hord. Vini Rubri, ana unc. quatuor; Syr. Lujulæ unc. tres; Ol. Sulphur. per Camp. gut.* xx. *M.*

℞ *Ol. Vitriol. dul. per digest. fact. dracm. duas, cap. gut. octo in omni haust. potus.*

He continued the use of these things, and in a weeks time his Fever was perfectly gon; he recovered Strength, and was wholly free from his Shortness of Breath, and all the other Symptoms he complain'd of. I then prescribed the following Purge, which was repeated two or three times at due distances, and he

he is now as hale and hearty a Man as any in *England.*

℞ *Rezinæ Jalap. gr. decem; Antimonii Diaphoret. gr.* xii. *Crem. Tart. scrup. unum; Syr. Balſ. q. ſ. f. Bolus, cap. primò manè cum regimine.*

FINIS.

A RELATION

Of a very Sudden

AND

EXTRAORDINARY CURE

of a Person Bitten

BY A

VIPER,

By the Means of ACIDS.

Together with

Some REMARKS upon Dr. *Tuthill's* Vindication of his Objections against the DOCTRIN of ACIDS.

In which are contain'd several things in order to the further clearing of the said Doctrin.

By JOHN COLBATCH, *a Member of the College of Physicians*, London.

The Second Edition Inlarg'd.

LONDON,

Printed for *D. Brown* without *Temple-Bar*; *A. Roper* in *Fleet-street*, and *T. Leigh* in St. *Paul's* Church-yard. 1699.

To the unknown

Dr. *COLBATCH*,

Upon his ſeveral

Moſt Ingenious Tracts in PHYSIC,

Eſpecially that of

ALKALIES and ACIDS.

PHYSIC for Ages paſt has grop'd her way
In Paths of Darkneſs, without any Ray
Of certain Truth, and ſtill was going aſtray:
When *Colbatch* roſe, who with reviving Light
Diſpel'd the Clouds, and chas'd away the Night.
By him th' important Secret is reveal'd,
Thro Fraud and Ignorance ſo long conceal'd.
No ſordid hopes of Gain e'er ſway'd his Mind,
His only Aim's the Good of Human kind;
Who firſt with Pains and Labor dug the Oar,
Then freely gave us all the Golden Store.
Name,
Let Juggling *Quacks*, grown envious of thy
Combine together to obſcure thy Fame;
Such are the Myſt'ries which thou doſt unfold,
They'l write thy Name in Characters of Gold:
To Thee alone Mankind's indebted more,
Than all the Doctors that have gon before.

J. C. junior.

TO THE READER.

I Have in all my Writings taken Truth for my Guide, which is the Soul of an Undertaking, and a Duty that ought to be ſtipulated by every Writer, both with God and Man; and this I may ſay, I have not wanted courage to ſpeak it, nor means to diſcern it.

The oppoſition I have met with has bin almoſt inſupportable, Truth at its firſt appearance never wanting multitudes of Oppoſers; but, thanks to God, the Eyes of the World begin to be open'd, and the new Doctrin I have advanced has gain'd ſo much ground, that few Authors in their own life time have ſcarce ſeen the like. This unwonted and unexpected Incouragement that I have met with, has fill'd me with ſuch a ſenſe of Gratitude, that at preſent I am not able to expreſs it; neither can I better manifeſt it, than by proſecuting the Work I have begun, with all the diligence and induſtry I am capable of, and this I oblige my ſelf to do.

Reaſon is the true Touchſtone by which we ought to examin every thing; and according as any thing agrees or diſagrees with it, we ought either to imbrace or reject it. I remember that Prodigy of Nature, the Learned Mrs. Ann Bay-

 nard,

nard, *did once in my hearing say*, That Reason was that eternal Standard, which God Almighty, as a Ray of his own Image, has impressed on Man, to the election or dislike of what may hurt or succor him; and where this is rais'd and improv'd, it makes him an Angel, but where sunk and depress'd, a groveling Brute.

I do protest I never yet advanced any thing before I had weigh'd it in the Balance of the best Reason that God has given me; and lest Reason alone should deceive me, and thereby suffer me to impose upon the World, I have always join'd Experience to it; so that both being combined together, I could not well be deceived my self, nor lead others into error. And I am apt to believe, that if People would but lay aside their Prejudices, and consult their Reason, I should not have one Enemy. But to my no small grief, I have heard some Physicians of no ordinary reputation, positively declare, That Authority, and not Reason, was what they depended upon. Of these men I have little hopes; but since they won't hearken to my Reasons, let them but inquire into the success of my Practice; and if they find by the means of Acids *I am able to cure those Distempers which are not to be cur'd by* Alkalies, *I hope it will at last cure them of their Scepticism.*

From one Generation of Physicians to another it has constantly bin handed down, that the Gout *was a Distemper not to be cur'd; and in spite of all the Noise the last Age has made about experi-*

mental Philosophy, no man ever went out of the common Road to try the Truth or Falshood of this Position. But now it evidently appears that the Gout is not such a Fury, but may with ease be overcome by proper and powerful Acids; *and there is scarce any part of* England, *but one or other can experimentally attest the truth of it. Now if it evidently appears that my Predecessors have bin notoriously ignorant as to the Cause and Cure of so common a Distemper, it is not unreasonable to believe they have bin so in other Cases, nay it is most certain they have: and there are many honest Gentlemen of the Faculty who are not ashamed to acknowlege it, and that not only in words, but by the alteration of their Method of Practice; tho there are another sort, who with good success have of late made use of* Acids *plentifully, and at the same time given me all manner of opprobrious Language: but I thank God I am out of their reach, and tho they persist in their ingratitude, I shall still indeavor to serve them to the utmost.*

I know there are many who will read these Papers with no other design than to find faults: but the Barking of these Critics will never disturb me, because I have undertaken nothing but with a design to serve Mankind; and I doubt not, in spite of all the imperfections to be met with, there are many Candid, Ingenuous men, who will make as favorable a construction of this, as of my former Undertakings. And if such are pleased, I care not what the envious Critics say.

JOHN COLBATCH.

A Relation *of a very ſudden and extraordinary Cure of a Perſon bitten by a* Viper, *by the means of Acids.*

ON Saturday *March* the 26*th*, one Mr. *Stringer* a Chymiſt in *Villers-ſtreet York-buildings*, was ſeeing a Collection of Rarities that were expos'd to public view in *Stocksmarket*; among others there was a living *Viper* kept in a Glaſs of Bran. The perſon who ſhew'd the Collection, upon ſome inducement or other, took the Viper out of the Glaſs to ſhew Mr. *Stringer*; but handling him more rudely than he ought, inrag'd the Viper, and he bit him by the Finger; and from the place into which the Tooth entred, there iſſued forth a few drops of Blood: it was juſt above the upper joint of the fore Finger where the Tooth entred.

At firſt the man, whoſe name is *Philipſon*, made nothing of it, but in a little time his Finger ſwel'd and pain'd him excedingly; upon which, by ſome body's direction, a *Hot Iron* firſt, and afterwards *Venice Treacle* and *Oil of Vipers* were applied to the part; but the ſymptoms not abating, Mr. *Stringer* adviſed him to ſeek out for further help: he perceiving Mr.

Stringer had some knowlege of the matter, desir'd his assistance; upon which Mr. *Stringer* sent to Mr. *Francis Molt* a Chymist for some *Salt of Vipers*; but Mr. *Molt* not being at home, and that not being to be had, he sent to another place for some *dulcified Spirit of Niter*, a large quantity of which he gave him in *Claret*, and with the rest he embrocated his Finger and Hand, which at the present afforded him some relief, he being then in extreme Agonies, and had such a trembling in his Hand and Arm as is scarce conceivable. But in a little time the Symptoms returning, the dulcified Spirit of Niter not being powerful enough to overcome so subtil a Poison, Mr. *Stringer* again prest him to seek for further help: upon which he told Mr. *Stringer* he had a Brother in *Pal Mal*, an Apothecary, to whom he would apply for advice: so Mr. *Stringer* and he went to his Brother in a Coach.

When he got there, the Symptoms were so aggravated, that his Brother was under great concern for him, and propos'd sending for Dr. *Sloan* and several others; but Mr. *Stringer* mentioning me, he readily assented to take my advice: upon which they got into the Coach, and drove to Mr. *Stringer*'s House, by which time the man was grown so weak that he could scarce stand. After they had gotten him into a Room, they sent for me; but I not being at home, Mr. *Stringer* sent for Mr. *Alexander Small* a Surgeon in *New Round Court*,

Court, a young Man of great Honesty and Industry, and one whom I frequently imploy.

Mr. *Small* having never seen any thing of the like nature before, was at a stand: he first thought of scarifying the Finger, but when he considered that the Tumor had extended it self even to his Shoulder, in which he had very acute Pains, and from the other Symptoms that attended him, concluding the Poison had dilated it self thro the whole mass of Blood, he altered his first resolution, and instead of scarification made use of the following method. Before I give an account of which, I shall take notice of his circumstances, as related to me by Mr. *Small*, Mr. *Stringer*, and Mr. *Philipson* Apothecary, the man's Brother. His Hand and Arm, as above said, were extremely swell'd and inflam'd, and full of pain; but the pain in his Finger where the Bite was, and that in his Shoulder much exceded the pain in other parts: he had a great Giddiness, and Faintness, insomuch that he could scarce sit without being held in the Chair; an extraordinary and violent Strangury also attended him, with cold sweats, and great disorders in his Stomach and Bowels, and his Countenance turn'd extremely yellow, and he stretch'd out, almost, as dead. Mr. *Small* and Mr. *Stringer* provided a good quantity of my *Elixir Vitrioli*, an account of which and its preparation may be met with in the last Edition of my *Essay of Alkaly and Acid*.

With this Elixir Mr. *Small* embrocated the Fingers, Hand and Wrist for near half an hour together, and two or three times in the said space he dipp'd the end of the bitten Finger in plain Oil of *Vitriol*: in the interim he gave him two or three Drams or more of the *Elixir Vitrioli* inwardly in a large quantity of water, when the man finding a great propensity to vomit, Mr. *Small* advised him to put his Finger in his Throat and help it forwards; after he had vomited plentifully, Mr. *Small* plied him afresh with the *Elixir Vitrioli* in water: the quantity he took after his vomiting Mr. *Small* guesses to be near, if not quite, half an ounce.

In less than half an hour after Mr. *Small* came to him, all the Symptoms, except the swelling of his Hand and Arm, which was sensibly lessen'd, were totally vanished, and he able to walk from *York-buildings* to the *Grecian* Coffee-house in *Essex-buildings*, to find me out for further directions in the Matter. Now the violence of the Symptoms being abated and gon, I prescrib'd him more temperat Acids than those he had before taken, and that had bin applied to the affected parts.

℞ *Fol. Rutæ contus. manip. duos; Rad. Angelicæ Hispan. pul. unc. duas; Micar. Panis albi unc. quatuor; Aceti acerrimi lib. duas: coquantur ad debitam consistentiam, cui adde Ol. Scorpion. unc. duas. M. f. Cataplasma.*

* ℞

℞ *Elix. Vitrioli dracm. duas; Sp. Vini Rect. unc. duas. M. f. Mixtura.*

℞ *Fol. Rutæ manip. unum; Rad. Serpentariæ Virgin. dracm. ſex; Angel. Hiſpan. unc. unam; Petaſitidis unc. unam ſemis; Vini albi, Aceti acerrimi, ana lib. unam. Infunde calidè per horam, & coletur.*

Sig. the Infuſion.

℞ *Ol. Vitrioli dul. per digeſt. fact. unc. ſemis.*

Sig. Dulcified Oil of Vitriol.

I order'd the man to go to his Lodging, which was in *Black Friers*; and becauſe his Brother could not get the forementioned things ready under three or four hours, I adviſed him as ſoon as he came home, to take three ounces of Treacle Water, (in my opinion one of the beſt Medicins in the *London Diſpenſatory*) and as ſoon as he had taken it, to go to bed.

I order'd the *Cataplaſm* ſhould be applied warm to the Hand and Arm as far as the ſwelling reach'd every ſix hours; and before applying the Cataplaſm, that the parts ſhould be well embrocated with the Mixture.

Of the Infuſion he took four Ounces every four hours.

When-

Whenever he was thirsty, I advised him to take twenty Drops of the dulcified Oil of Vitriol in a draught of White Wine and Water.

On Sunday morning about eleven a Clock I went to visit him, and when I came to his Lodgings, I found Dr. *Sloan* with him; the Doctor said the Method that had bin used was new, but that the Man was in a very good condition, and out of all danger. He had slept well the whole night, and was not in the least feverish, neither had he any disorder upon him, only a very small pain in his Finger, the swelling of his Hand and Arm being greatly abated.

I order'd the continuing of his former method, which I had no reason to vary. But Dr. *Sloan* proposed, that if his Infusion should make him puke, as it once had done, then instead of it, he should at the same intervals take half a dram of *Virginian Snake-Root* in pouder, drinking afterwards two or three ounces of Treacle-water, sweetned with Syrup of Gilliflowers; which I consented to, it no way thwarting the Methods before taken.

At night I visited him again, and found him as brisk and well as if nothing had ail'd him; the Infusion had not disagreed with him, and therfore he took not the Pouder of *Snake-Root*: but I mix'd the Treacle-water and Syrup of Gilliflowers with the remaining part of the Infusion, and order'd him to take four ounces of it morning and evening only, so long as it lasted.

The

The next day I visited him again, when I found him up and eating his Dinner very heartily. I then order'd him to continue the use of the Cataplasm so long as he found the least swelling in any part, and then dismissed him from my care, there being not any need of my further attendance.

A small swelling of his Finger continued for some time after, but without trouble or pain.

I believe I may without vanity say, that considering the symptoms attending this man, which were as severe as possible, and that he surviv'd, there has not bin a more extraordinary Cure wrought; nor such Symptoms, raised upon the like occasion, ever taken off in so short a space.

Now did the poison of Vipers consist in a Volatil Acid, as some would make us believe, how is it conceivable that these dreadful Symptoms could be so soon taken off, by giving more Acids, and that in so extravagant a quantity as they were at first given by Mr. *Stringer* and Mr. *Small?* Nay, had the Poison bin an Acid, it is very reasonable to believe, that the more Acids they had given him, the more his Symptoms would have bin aggravated. Wheras, on the contrary, it plainly appears, that by the repeated large quantities they gave him, the Symptoms were so soon abated, that it is almost past belief.

I cannot but observe, that in the strange relation Dr. *Stubbs* gives of the severe Symptoms attending the man at *Warwick* that was bitten by an Adder, the only thing that sav'd his life, was the *Mixtura simplex* that was given him, which is a most noble Acid: but this man had not the *Mixtura simplex* given him in such quantities, or in any proportion to the Acids Mr. *Philipson* took; nor was his Cure so expeditious or so easy, as may be seen in Dr. *Stubbs*'s Relation.

The hot Iron was as useless in this, as in that Case; and I am apt to believe never dos any service at all, unless applied at the very instant the Bite is received.

Mr. *Philipson* suck'd his Finger as soon as he was bit, and to that a certain Physician attributes a great deal, and says it help'd to expedite the Cure. Wheras there are several Authors of undoubted credit, who have given Relations of persons that have died by so doing; and if this man had suck'd out any great quantity of the Poison with his mouth, how came the whole Hand and Arm to be immediatly affected in so dreadful a manner?

Lemery in his *Course of Chymistry* dos confess, that the *Viper* abounds more with volatil Alkalious Salts, than most other Creatures, and assigns a very good reason for it, *viz.* the extraordinary closeness of the cutaneous Pores, which makes them not perspire so freely as other Creatures. Nay he confesses, that their

Poison

Poiſon conſiſts in the emiſſion of a very great quantity of Volatil Salts, at the time of their being inrag'd or anger'd; but then to ſquare himſelf with the vulgar Opinion, he tells us, that theſe volatil Alkalious Salts are inſtantaneouſly, at the time of their emiſſion, during the Vipers ſhort rage, turned into Acids of the moſt volatil nature: This is ſuch Jargon that nothing can be imagined like it. The tranſmutation of Metals (even to thoſe who are the greateſt enemies to it) is a mere jeſt to it.

If we look into *Moſes Charras* his account of the *German* that was bit at his houſe, after all the pother he makes about his volatil Salt of Vipers, the Cure of that man was not perform'd without a great deal of hazard and trouble, and the intermixture of many other Medicins, beſides that of the volatil Salt, even Acids, as Treacle-water, and ſlices of Citrons with Sugar; but theſe Acids could not ſo effectually operat, as otherwiſe, it's probable, they would have done, becauſe obtunded by the Volatil Salt ſo frequently given him. But *Hoffman* in his *Clavis Pharmaceut. Schroderi, pag.* 45, & 46. (as I have elſewhere obſerved) wholly attributes the Cure of this man to the Juice of Citrons, after all other things had proved ineffectual; and ridicules *Charras* for feigning the Poiſon to be an Acid: For if this were ſo, ſays *Hoffman*, how could the *Juice of Citrons*, which is an Acid, afford the Patient any relief?

I shall conclude this subject with one Observation, *viz.* That Physicians get more reputation by keeping their Patients a long time in hand, and in continual danger of their lives, than by quick and expeditious Cures. As for instance:

One Physician has a Patient sick of a Fever; he takes such a method that his Patient lies a month in continual danger and hazard, but at last recovers and gets abroad: he then proclaims to all the Miraculousness of the Recovery, and the Danger he was in; upon which inquiry is made who was the Physician? he immediatly replies, the famous Doctor such a one; and if he be a Person of any Note, the Physician's work is done.

Another Physician has a Patient with the very same Fever; this Physician takes care to obviat all Symptoms, and his Patient is abroad in eight or ten days, and perhaps has never bin in the least hazard of his Life. He, instead of magnifying the skill of his Physician, tells his Friends, my Physician says I have had a Fever, such as my Neighbor such a one had, but I believe he is mistaken, mine could be no more than a Cold, which would have gon off had I done nothing at all; and this is frequently the Reward that honest men meet with. And I doubt not but the same reflections will be made upon Mr. *Philipson*'s Cure, *viz.* that he would have bin well in the same time, had nothing at all bin done to him.

Several

Several Phyſicians have publicly ſaid, that a prick with a Needle, or the point of a Lancet in ſome parts, would occaſion as dreadful Symptoms as this man had. Suppoſing this true, I believe every body will allow that the taking off ſuch Symptoms in ſo ſmall a time, let the occaſion of 'em be what it will, is not ordinarily ſeen; and Dr. *G.* with the prick of a Lancet only, was hurried away into another World, who yet was as likely to make the foremention'd Objection, to undervalue any thing done either by me, or upon the Baſis of my Hypotheſis, as any one now living.

I will not pretend to juſtify Mr. *Stringer*'s conduct in many things; but he being greatly concern'd in the firſt and moſt material part of what was done for Mr. *Philipſon* in order to his Cure, I could not in juſtice but make uſe of his Name as he deſerv'd. But for Mr. *Small* the Surgeon, he is of an unblemiſh'd Reputation, and as hopeful a young Man as any of his Profeſſion, whoſe Teſtimony alone is ſufficient upon ſuch an occaſion; but the Teſtimonies of Mr. *Philipſon* the Apothecary and the man himſelf being join'd to his, makes the matter of fact unqueſtionable.

REMARKS

REMARKS upon Dr. *Tuthill's* Vindication of his Objections againſt my Hypotheſis.

Worthy Sir,

YOU are the only fair Antagoniſt I ever had to do with, and therfore I ought to treat you with all the tenderneſs and reſpect imaginable. You cannot but be ſenſible that I walk in an unbeaten Path; for which reaſon if now and then I am out of my way, I am the more excuſable. It's true, ſome few other Phyſicians have heretofore uſed *Acids* in the cure of ſeveral Diſtempers; and the friendly correſpondence I have had with ſome of them has bin of great uſe to me: but the aſſiſtance I have had from them as to the eſtabliſhing of my Principles, has bin very inconſiderable. If I have made any falſe ſteps, none of them are obliged to anſwer for me; and if I have made any good ones (which I cannot forbear flattering my ſelf that I have) it is owing to my own labor and induſtry; and tho I was not bred up at the Univerſity, yet I have taken as much true pains to inform my ſelf in all the Parts of Phyſic, as perhaps any man ever did.

Let

Let an Hypotheſis be laid down with all the caution and care in the World, and eſtabliſh'd upon never ſo certain a Foundation, there will be ſtill ſome room left for men to object; and he that will ſpend his time in anſwering all trifling Objections againſt a thing that is new, muſt lead but an uneaſy life. Yet, Sir, I do not mention this in relation to you; what Objections you have raiſed have ſeeming weight in them, and therfore I have taken the trouble to clear my ſelf of 'em as well as I can.

I no where tell you, that I have ſaid all that may be ſaid on behalf of my new Hypotheſis, this requiring ſeveral years to perform. But I have already ſaid ſo much, that I think I may boldly declare, 'tis the beſt and cleareſt Hypotheſis in Phyſic now extant, and that upon the foundation of it a man may with greater certainty attempt the Cure of moſt Diſeaſes, than upon any other yet made public.

The preſent buſineſs of my Profeſſion, together with another Work I am ingag'd in, viz. *A general Treatiſe of Fevers,* dos ſo take up my time, that I cannot make any large Remarks upon your further Objections; and were it not that I am willing to let the World ſee I have a greater eſteem for you than for thoſe Scoundrels that have hitherto appear'd in Print againſt me, for the preſent I ſhould have bin ſilent. For I muſt aſſure you, I do not think my Hypotheſis at all ſhaken by what you have

now ſaid, there being little or nothing more than was contain'd in your firſt Objections. However I ſhall tranſcribe your freſh Objections in the order I find 'em, and make my Remarks in the ſame manner.

Reply. *If you pleaſe to compare the Alkalin Spirit that you extracted from the Conſumptive Man's Blood, with that which the healthy Blood afforded, you'l find no great diſproportion, eſpecially if you conſider the* Caput mortuum *of the ſound Blood. For you ſay that it being broken into ſmall Atoms, each Atom appear'd to be ſo many little Bodies of Fire in your Microſcope. That there is not the leaſt ſpark of Fire in the Blood, I ſhall indeavor to prove anon; wherfore 'tis not irrational to ſuppoſe that thoſe lucid Atoms were of the Family of Salts: And if Salts, then Alkalin, according to the Rules of your own Hypotheſis. But then (you reply) the Tabid Blood would have yielded much more Alkaly, had not the great quantity of luxuriant Alkaly bin thrown upon the Lungs. Methinks this looks a little ſtrange: For if you remember, the Conſumptive Perſon did ſweat prodigiouſly. Now you make Sweat to be nothing but an excrementitious Alkaly. If this Alkaly then was carried off in ſuch quantities, it could not well abound ſo much in the Lungs.*

Remark. This Objection or Reply to my Anſwer is a tolerably good one, and not without ſome ſeeming weight; yet is what I can eaſily clear my ſelf from. For,

Firſt,

First, I have before taken notice of the ſmall diſproportion between the two peoples Blood, and have aſſign'd one very good reaſon for it; but according to your wonted Candor, you have furniſh'd me with a ſecond, and that is the profuſeneſs of the Sweats. Now if after theſe two great diſcharges of excrementitious Alkaly by ſweating and ſpitting, the Blood at laſt abounds with any quantity of Alkaly more than that of a ſound perſon, it is, I think, very reaſonable to ſuppoſe, that the Blood's being at firſt overcharg'd with Alkaly was the cauſe of the Diſtemper; and in many Conſumptive Caſes it is uſual for the Patient to ſpit perfect Chalk, and that in great quantities. Now if the Blood were overcharged with Acids in Conſumptions, the whole Maſs paſſing ſo frequently thro the Lungs, could not fail of being ſweetned by this Chalky Alkaly. But on the contrary, I think it very plain, that the Tone of the Lungs being ſpoil'd, and the Blood abounding with Alkaly, a part of this ſuperabundant Alkaly is thrown upon them, and cauſes all the havock that is made by this Tyrannical Diſtemper: and this being a Diſtemper of which moſt of my Predeceſſors have died, and I my ſelf am apprehenſive, has made me not a little inquiſitive into its Nature and Cauſe.

Secondly, That you might load the Blood of the healthy perſon with more Alkaly than I take notice of, you pretend from my Hypo-

theſis, tho without reaſon, to aſſign the cauſe of the Lucidneſs of the Atoms of the *Caput mortuum*, from its abounding with Alkalious Salts. Now I can aſſure you, that the whole quantity of *Caput mortuum* which that Blood produced, would ſcarce afford one grain of Salt of any kind. But ſuppoſing it to contain only the fourth part of a grain of *Phoſphorus*, this would diffuſe it ſelf thro the whole, and make it lucid. The *Phoſphorus* is a true Animal Fire, and may be extracted from all Animal Subſtances; and if it did not exiſt in them, how could it be extracted from them? And that the *Phoſphorus* is an Acidoſulphureous Subſtance, is to be demonſtrated without difficulty. And I have plainly told you, that the *Pabulum* of Animal Fires is a ſulphureous Acid.

Your ſecond and third Replies I ſhall not meddle with, becauſe you either grant me what I have ſaid, or elſe procede upon mere ſuppoſitions, of which I can take no notice.

But here you fall upon me again without that order I could wiſh, firſt with *Anſwer*, and then *Firſt* and *Secondly* again, and ſo on. Of this I ſhall take no notice, but go on from your firſt Reply to the Second, Third and Fourth, *&c.* in their order, and mark the pages in the Margin.

Reply.

Reply. You say, *That in page the 67th of my Answer, I know not what to make of your warm Particles. And by way of Reply you say, you mean Alkalious Particles, such as you believe the Blood abounds with in some Fevers, and in which you grant Acids are of use.* But yet (say you) *I cannot agree with your notion of Fevers.* Pag. 6, 7, 8.

A Fever (say you pag. 68.) *procedes from a Constipation of some of the Emunctories, so that the excrementitious Alkaly, which should be carried off by them, is detained in the Blood, which by breaking its Globules, &c. This Doctrin dos not seem at all to correspond with your Practice. For Spirit of* Vitriol, *and other Acids which are very stiptic, the use of which you applaud in Fevers, should methinks constipate the Pores more closely; and then they being of a very fixing nature, should fetter or retain those excrementitious Alkalies. Again, if Fevers are occasion'd only by a detention of these Alkalies, it must follow, that whenever they have free vent, the Fever must abate. But the contrary has bin somtimes experienced, where the Patient has sweated very liberally, and yet died at last. If this will not serve the turn, I hope to make it appear anon, that Alkalies are not capable of breaking the Globules, and making such a bustle in the Blood. But I cannot but speak one word or two in their defence before I go any further. I am very apt to think, that in some Fevers, especially Pestilential and Malignant, the Spirits*

are primarily affected, according to the Hypotheſis of the Ingenious Dr. Morton, *witneſs thoſe Symptoms which attend the* Nervoſum Genus *immediatly upon the firſt ſeizure. But you muſt not admit of this notion, from the ſoil which you muſt lodg in the Blood, and thence be communicated to the Spirits. Well, let it be ſo, I will not diſpute it: the difficulty on your ſide will be great ſtill. For tho I ſhall readily grant the Globules to be broken in the aforeſaid Fevers; yet 'twill be a hard matter to convict Alkalies of thoſe tragical diſorders. For firſt, experience ſhews that nothing is more proper in thoſe Caſes* Malignant (*I ſhall adventure to uſe the term, notwithſtanding it has bin ſo ſcouted of late*) *than* Pul. e Chelis, Rad. Serpentar. *nay,* Sp. C. C. *it ſelf, given in a proper Vehicle. But ſecondly, nothing dos ſo readily diſſolve the maſs of Blood, or ſeparat its Principles as Acids, which I ſhall prove by and by, when I come to ſpeak ſomthing of Dropſies. But this long diſcourſe of the heat of the Blood, dos naturally lead me to conſider ſomwhat of its Flame.*

Remark. I ſtill affirm that Fevers in general procede from a conſtipation of the Emunctories. Now I mean by *Emunctories*, thoſe parts which are only deſigned and provided by Nature for the ſeparation of the Excrements from the Blood; and whenever they are ſo diſordered as not to be able to perform that office, there muſt either a Fever, or ſome other great diſorder follow. And that this Doctrin quadrats

drats with my Practice, is very plain. For whenever these Emunctories are over-relax'd, they cannot squeeze out the excrementitious Particles in sufficient quantities, and so they return back again into the Blood, and cause Fevers, or some other disorder; and of consequence Spirit of *Vitriol*, or some such kind of *Stiptic* is the only proper remedy to take off this disorder. But to knock this matter on the head, you say that in many Fevers the Patient sweats so much, that it has cost him his life. This I will readily grant you, but the Sweats you mean are certainly such as we call *colliquative* ones; in which cases the Emunctories are so overmuch relax'd, that they cannot bear a congestion at all, and so there is no such thing as a secretion, but the Juices good and bad are all let out together; and unless they can be prevented by proper Stiptics, which will put Nature into her right course, the whole Fabric must soon be destroy'd. And it is also to be observed, that in such Fevers the heat dos scarce excede that of the natural temper, the Pulse being also exceding low. In the latter part of this Reply you altogether go upon suppositions, without the least kind of demonstration, and so it is scarce worth taking notice: but however to manifest my respect, I shall go on with it. As for what you mean by the Spirits being primarily affected in Pestilential and Malignant Fevers (all deference had to the Worthy Dr. *Morton*) it is *Heathen Greek*

Greek to me: For by my own experience (to use your terms) in such cases I have found the Blood so full of soil, that from thence I stick not to account for all the depression of Spirits, and other nervous Symptoms that attend those Fevers. And for a *Fever of the Spirits* purely, a very late Author has sufficiently exploded that matter. And in my own Practice, within the space of a twelve month; I have bin concern'd with three Persons (and thanks to God I have seen no more) that have had the true Pestilence or Plague; the Blood of all which I have seen, and indeed it has rather deserved the name of *Soil* than *Blood*, they being such masses of Putrelaginous Substance, as no man could without horror behold; and (by Divine assistance) two of these persons I recover'd by the means of Acids, and believe I might have done the same by the third, had I bin call'd in time. As for what you speak of your Experience as to the efficacy of *Pulvis è Chelis*, and *Sp. C. C.* 'tis a mere trifle; for if ever any thing was done after the exhibition of them, Nature her self deserv'd the whole honor, nothing in the least being to be attributed to the Medicins, as may demonstrably be made appear, and to please you I shall indeavor to do. But by the way I beg of you not to rank the *Rad. Serpentariæ* with the *Pul. è Chelis* and *Sp. C. C.* for the *Rad Serp.* belongs to me, it being a most noble sulphureous Acid invelop'd; and that it is so, I will be obliged

to

to maintain. But to return. I do boldly assert, that in no Fevers I ever yet met with, either *benign* or *malign*, could I observe the Patient to be in the least sensible of any Acidity in the Stomach or Mouth, but generally those parts have bin clog'd with a Matter that looks so like *Alkaly*, that if it be not the very same, I am sure 'tis no kin to the *Crab-Tree*. Now suppose it to be Alkaly, as 'tis plain it is, what can the *Pul. è Chelis*, which is a fixt Alkaly, or the *Sp. C. C.* which is a volatil one, do to remove it? The *Pul. è Chelis*, or any Medicins of that Tribe, I mean of the *Testacea*, for want of an Acid to dissolve them, must lie upon the Stomach, and by clogging that, cannot fail of doing much mischief to the whole Body. As for *Sp. C. C.* or any Medicins of that kind, I see no reason for the exhibition of them, because it is clearly manifest, that the Blood of feverish People is always over-clog'd with particles of the same nature, *viz.* volatil Alkalious Salts. But instead of the *Testacea* and volatil Salts, if you use any of the following sort of Medicins, I am apt to believe your Practice in Malignant Fevers will be more successful than it has hitherto bin, *viz.* such as *Aq. Theriacalis* in large quantities, *Mixtura Simplex*, *Elix. Vitrioli N°.* an Infusion of *Virginian Snake-Root*, &c. in Vinegar, *&c.* but here I have not room to expatiat. By the use of these Medicins you may raise the Pulse, and fortify the deprav'd and paul'd Stomach,

Stomach, promote due and regular Secretions, and change the malignant colliquative ſymptomatic Sweats into benign and critical ones. But this is not a place for me to inlarge upon the method of the Cure of Fevers, that being reſerv'd for a particular Tract by it ſelf; which with other things I have promiſed, ſhall appear abroad as ſoon as poſſible.

As for what you here ſay in relation to Acids diſſolving the Blood, I ſhall now take no notice of it, becauſe you handle that matter more largely in another place.

Reply. *And here the Life of Man you take to be a Fire or Flame; and all we eat and drink, together with the Air we draw in, to be Fuel for this Flame. The chief Arguments you bring to confirm this Doctrin, are taken from the Excrements of this Flame and its Fuel. The Excrements are Alkalies, which are near of kin to Aſhes, the Relicts of other Flames: And for its* Pabulum, *'tis Acid and Sulphur, the common* Pabulum *of all Flames. Here I muſt confeſs you talk very ingeniouſly, and highly improve the Notions of that great Philoſopher. But let us examin this Hypotheſis a little. As for* Alkalies, *I confeſs they are of the ſame nature with* Aſhes *and* Soot: *Yet it dos not follow, that becauſe Alkalies are found in the Blood, there muſt be a Flame too. We extract Alkaly out of ſeveral Herbs: 'Tis true, the Herbs muſt be calcin'd firſt. But certainly the Salt was pre-exiſtent in the Herb before the Calcination, or elſe the Fire pro-*

produc'd it de novo, *which you will by no means admit. The Inference then is plain. I will not adventure to say any thing of* Crabs-Claws, Oister-Shells, *&c. lest you should make them the Recrements of a vital Flame. Come we next to the* Pabulum, *and that is Acid and Sulphur. That Bodies in which Sulphur is predominant, are inflammable, no body questions: But that such in which Acid is the chief Ingredient should burn, looks like a Paradox. To instance in a few:* Acet. Spirit. of Vitriol. Suc. Limon. *&c. are so far from promoting Flame, that they immediatly quench it: And indeed I know but one Acid in Nature which is inflammable, and that is* Niter. *But then this Vital Flame is not of a nature with Culinary Flames.* Answer, *Since the* Pabulum *is the same, methinks the Flame should be so too. Again, tho you speak so much of this Vital Flame, yet you do not, as I remember, much care to fix the place of its existence. I suppose it must be in the Blood, if any where. Now 'tis very hard to suppose a Flame in that Body, of which no part is inflammable. If you open a Vein, and the Blood spouts out reeking hot on the Fire, it will immediatly quench it. So that methinks, these Notions seem to be a little too finely spun. Acid and Sulphur do support human Life; Men live upon Coals, Brimstone,* &c. *in which there is store of Acid and Sulphur. That we cannot subsist without Air is evident: For tho there is no Fire in the Blood, there is Motion undoubtedly. Now the Nitro-aereal Particles*

ticles give à freſh Fermentation (or Motion) to it, and free it from Coagulation. If you are not ſatisfied with this, conſult the Ingenious Dr. Mayo. *But then the Blood has heat and warmth; and theſe are the Properties of Fire.* Anſw. *May they not be excited by its Motion? No (you* reply) *we are much warmer in Bed when we uſe no Exerciſe, than when we are up and in Motion.* Anſw. *The Body indeed is in no motion there; but the Blood is in greater than when we are out of our Beds; and 'tis impoſſible it ſhould be otherwiſe. For do not the Bed-clothes protect us from the Coldneſs of the ambient Air? And are not a great many of the Volatil Alkalies detain'd by them, which reflecting upon the Body, warm it, and accelerat the Motion of the Blood? But after all, if we move violently when out of our Beds, we are much warmer than when in them. You are pleas'd to object, 'tis impoſſible mere Motion ſhould cauſe any Heat in fluid Bodies. How ſo? Let a Man put* Spirit. Corn. Cerv. *and* Spirit. Vitrioli *together, and obſerve their Effects, they will ſoon grow warm. 'Tis evident, they do not ſtand ſtill, but move very briskly before they are warm. And what is the Heat of theſe Bodies occaſioned by, but their Fermentation or inteſtin Motion? Surely it cannot be by Accenſion.*

Remark. That the Life of Man is a Flame, I think I have ſufficiently demonſtrated before, and ſhall here indeavor to make it ſomwhat more plain. The *Phoſphorus* is to be obtained from

from all Animal Subſtances; and that it is a Fire is paſt diſpute, it performing all thoſe things that common Fire will, *viz.* inkindle inflammable Bodies, give heat and warmth to things near it, afford Light in the Dark, *&c.* and yet in many things differs from common Fire. Now if this Fire were not actually exiſtent in Animal Bodies, how is it poſſible it ſhould be extracted from them? Common Brimſtone, Tallow, Pitch, *&c.* abound with Sulphur, and of conſequence are inflammable; yet from none of theſe, by any Artifice now known, is there the leaſt quantity of *Phoſphorus*, or any thing like it to be obtain'd. The *Phoſphorus* will not burn, without a free acceſs of Air, any more than common Fire. But herein is a great difference between the *Phoſphorus* and common Fire: Let any inflammable Body be never ſo well inkindled, and afterwards the Flame or inkindled part immerg'd in Water, it will inſtantaneouſly be extinguiſh'd, ſo as not to recover it ſelf, tho expos'd to never ſo free an Air, without being again applied to ſome inkindled Body. Let a piece of *Phoſphorus*, in a dark night, be plac'd upon a ſheet of Paper, it will immediatly of its own accord, afford a Light, heat your Fingers, and burn the Paper: this piece of *Phoſphorus* put into water, will, in all appearance, be totally extinguiſh'd; yet tho it has lain in the Water for a whole year, upon being taken out, it will of it ſelf burn, *&c.*

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in the same manner as when put into the water. Upon stroking some Cats in the dark, multitudes of small flashes of Fire will follow ones hand, as I have frequently experienced: Now this gentle stroking can never cause so violent a Motion as you make Fire to be, and indeed is, unless it were actually existent in the Animal before. Tho I confess Fire to be a Substance constantly in motion, and that this motion is a very brisk one, yet all brisk motion is not a Fire, which from the *Cartesian* Hypothesis seems to be a necessary conclusion. But I can assure you, I know several Fluids, that the more briskly they are moved, the colder they are; as for instance, a River is always colder where there is a quick Current, than where the Water stands still: The Air is always more or less cold, as the Motion of it is greater or less; and I can assure you I have bin almost starv'd when forc'd to travel in high Winds in Winter, when the Air is most full of nitrous Particles, which you own to be inflammable: and behold here your *Nitrous Particles* in violent motion, and yet a man almost starved by them, nay several have actually bin so; so that you see they are not all kinds of violent motion, tho of Particles inclin'd to take Fire, that will cause a Flame. Thus 'tis clear I have sufficient reason to maintain my assertion, that mere Motion, tho never so much excited, will not occasion Heat in fluid Bodies, and that there is a difference in some respects

respects between the *Vital Flame* and common *Culinary Fire*, tho in many things they agree. I shall here again enumerat some things wherein Animal Fire and Common Fire do agree and disagree. *Animal Fire* will not burn without a due access of Air, neither will *Common Fire*; Animal Fire causes Heat and Warmth, so dos Common Fire; Animal Fire cannot subsist without a constant supply of sulphureous acid Particles, neither can Common Fire without a supply of the same, *&c.* Animal Fire (for so I call the *Phosphorus)* being immerg'd in Water, and afterwards taken out again, will regain all its properties of Light, Heat, *&c.* without being applied to other inkindled Bodies: This Common Fire will not do; for if once extinguish'd by immersion in Water, or otherwise, it cannot recover it self. I still assert, that such Bodies as are the proper *Pabulum* for Fire, are composed of Acid and Sulphur; but those that abound with most Sulphur, burn with the greatest violence; those that abound most with Acid, more slowly; and some Acid Substances that have little Sulphur in them, will scarce burn at all, especially if much diluted with Phlegm, such as *Vinegar*, *Juice of Lemons*, *Spirit of Vitriol*, &c. and therfore when the Heat of the Body is too intense, I give those Acids that are least impregnated with Sulphur, to abate the violence of the Flame; when the Heat is too remiss, I give sulphureous Acids to excite the

the Flame. You say you know but one Acid in Nature which is inflammable, and that is *Niter*: Now I assure you it is my opinion, nay I am very well able to demonstrat, that most, if not all pure Acids in Nature have their origin from the Niter of the Air; but pure Niter alone will scarce burn at all, unless mix'd with some kind of Sulphur. As for fixing a particular place for the existence of the Vital Flame, I thought there was no reason for it; but now I tell you, that I suppose it is diffused thro all the parts of the Body; and if by accident any part is destitute of it, a mortification insues. But then again you say, it is hard to conceive a Flame in that Body, of which no part is inflammable. Pray what think you of the *oily fat Particles* contained, not only in the Blood, but all other parts? are not they inflammable? The reason why we are warmer in Bed, and after violent exercise, is not to be attributed to any unknown Doctrin of Fermentation, but because we have a freer Perspiration at these times; and consequently the Flame must burn more freely. Your Comparison between the Heat of the Blood and that occasion'd by the mixture of Spirit of *Harts-horn* and Spirit of *Vitriol*, will not hold good; for in mixing those two Liquors, or in any kind of Fermentation, there is a very sensible commotion and hurry in all the parts of the said Liquors, whereas in the Blood of healthy Persons there is no such thing. I confess by the impulse

impulse of the Heart it is driven progressively from the center to the extremities, to supply the necessities of the Parts; but besides this progressive Motion, I know no other it has, all the Secretions being perform'd by proper Strainers, not from any Fermentation. Nay it is very easy for a man to perceive there is no such thing as a Fermentation in the Blood by the following plain Experiment, *viz.* Let a few ounces of Blood run out of the Veins or Arteries of a Man, or other Animal, into a very clear Glass Vessel, which you may put into a Sand Furnace, wherein the heat may be such as to keep the Blood in the same degree of warmth, as it came out of the Vessels; and if there be any such commotion to be seen with the best Light and best Eyes, as may be perceiv'd in those Liquors which are in a state of Fermentation, upon information I shall gladly own my mistake. There is, I confess, a Froth to be seen upon the surface of some Blood after it is let out into the Porringer, which looks like the surface of Liquors that are fermenting: But this Froth is so far from being the effect of Fermentation, that it procedes from nothing else but the different stream in which the Blood runs. For in the same Person, let one Parcel run out in a rapid stream, and it will occasion froth or bubbles; let another Parcel run out gently, and it will produce no such thing. Will not simple Water or any other Liquor do the same? But Blood being a

Liquor of a greater consistence, the Bubbles when raised will not so soon disappear, as in Water, or other Liquors that are more fluid; from which I hope it is plain, that the constant natural heat of the Blood dos not procede from Fermentation. And if the progressive Motion from the Heart to the Extremities gives it its heat, by the same reason, I think, the Water that runs from our Cocks should be warm also; whereas I dare be bold to say, that instead of gaining any heat by its rapid propulsion thro the Pipes, it is much colder than the Water in the River at the place whence it was received into the Engin. I had almost forgot to take notice of what you said concerning the *Production of Alkalies*; but it being a very material thing, I shall here expatiat a little upon what I have before said as to that Subject, and take all possible care to avoid repetitions. I have already own'd that Alkalies do actually exist in several Bodies as the principle of their death and destruction, but I never could yet hear of any one that has seen such a thing as either a volatil or fixt *Alkalizat Salt*, that was any other ways obtained out of Vegetable or Mineral Bodies, than from the Bodies after they were burnt, *viz.* out of the Ashes or Soot of them, which are their Excrements, or rather the Excrements of Fire; or else after the Body had undergon a Putrefaction, which is analogous to Fire. Now this being so in relation to Vegetables and Mine-

Minerals, I think it may not be amiss to infer, that the Alkaly to be found in Animal Substances is the Excrement of their Fire; and that which mightily confirms me in this Notion is, that all the Excrements of Animals are Alkalious, *viz.* a Matter thrown away either as useless, or incommodious; and of consequence all the Alkaly to be met with in the Blood or elsewhere, is an Excrement in a way of being carried off. I shall not say more upon this Head now, because I may have occasion to inlarge upon it, and upon the *Heat of the Blood*, in my Tract of *Fevers*. But what I have already said is, I think, sufficient to satisfy any one who is not a mere Sceptic. And for manifest Acids, they are to be met with every where almost, both in the Mineral and Vegetable Kingdoms, even in those Bodies that never underwent a Putrefaction, but are in the greatest state of Perfection; and for *Vinegar* and the like, it is so far from being the effects of Putrefaction, that it is the last degree of Perfection to which Nature alone is capable of bringing those Liquors. It is also to be observed, that those Fruits of which Wine is made, were first Acid, before they came to a state fit to make Wine; and that Putrefaction is the Cause of the Acidness of unripe Fruits, I believe none will assert. This Subject is also too long to handle fully in this place, and therfore I shall also omit the further prosecution of it for a Practical Discourse.

Reply. *If* Alkalies *are the Original of Diſtempers, whence is it, that in* Dropſies, Catarrhs, *ſome* Gouts, *and other Diſeaſes, we find the Texture of the Blood ſo thin? 'Tis obſervable, that thoſe Particles you term* Alkalies, *the more the Blood is ſaturated with them, of the more thick Conſiſtence it is, as we ſee in* Pleuriſies, Rheumatiſms *and other Inflammatory Caſes (in which Diſtempers, if in any, the Alkalies abound) Is not then its Tenuity rather to be imputed to Acids? Do not Acids immediatly put the Blood in a Fuſion, and render it thin? Your Anſwer to this is, that the Thinneſs of the Blood is not the only cauſe of theſe Diſtempers, but a deſtruction of the Tone of the Parts. Here methinks you do not argue ſo fairly. For you mention little or nothing of the deſtruction of the Tone of the Parts in your Etymologies of Diſtempers till now. And why may not I as well ſay, in Inflammatory Caſes the Blood is not affected with any Alkalin Particles? Theſe Inflammations only ariſe from a deſtruction of the Tone of the Parts; eſpecially, if you conſider what you aſſerted in your Notion of* Fevers: *For there the Emunctories are very much out of order. But you object, Since* Acids *will reduce the Blood to its due conſiſtence, it is not reaſonable to ſuppoſe they ſhould be the cauſe of its Fuſion.* Anſw. *Whether* Acids *will reſtore the Conſiſtence of the Blood, I ſhall examin by and by: I fear they will not. But this I am certain of, they will put it in a Fuſion. 'Tis well known that your celebrated*

Oil

Oil of Vitriol *taken alone, or tho in a Vehicle, if in too great a quantity, kills. Now how dos it kill? Dos it not by dissolving the Mass of Blood, by separating the Grumous Parts from the Serous, and breaking its Texture after the same manner as it dos that of Milk? Sure I am, that Blood coagulated by the aforesaid Oil, dos much more resemble* Whey *and* Curds *than Jelly of* Harts-horn. *Now then, what is all this but an extraordinary Fusion? And if a large Dose will make such mad work, and put the Blood into so great a fusion; certainly a less Dose must cause somewhat of a Fusion. And 'tis rational to believe that Oil of* Vitriol *is proper only in those Distempers where the Blood is too thick; very pernicious in such as have it too thin. And here I am glad you so opportunely give us your Sentiments of* Dropsies. *A Dropsy, say you, or the Thinness of Blood in that Disease procedes not from Acids, but overmuch Drinking.* Answ. *That large Draughts (there being little Evacuation by Urin) render the Blood thinner, is obvious. But the Patient had no such desire for Drink, till the Distemper was actually upon him. So that the Question is, what first brought on the Distemper. Was it not a weakness of Blood, or want of due Consistence? I do not see how you can well deny it. But then you reply, Let it be so, 'tis impossible Acids should occasion this ill Habit of Blood. For, Hydropical People are thirsty, and 'tis ridiculous to imagin that Acids should excite Thirst, when they are the only things in the World that will quench it.*

Anſw. *This I confeſs, at firſt ſight, looks like an invincible Argument: But I muſt crave leave to weigh it a little. That Acids drunk or held in the Mouth, uſually quench Thirſt, is an undeniable Truth: Tho 'twill hardly hold good in all Caſes. For, let a man drink Brine, which is very much impregnated with Acids, or eat high-ſeaſon'd Meats; I believe, tho he were a* Stoic, *he would immediatly grow thirſty. But common Salt is not an Acid of a right nature. Well, admit this. The moſt famous Acids that I know for ſuppreſſing Thirſt, are* Ol. Vitriol. Spirit. Vitriol. *&c. Now I hope to make it appear, that theſe, or Acids of the ſame nature, abounding in the Blood, may provoke Thirſt. I proved juſt now, that Oil of* Vitriol *had an ugly Faculty of coagulating the Blood, or ſeparating its Serum. That there is a ſeparation of the Serum in Dropſies, is evident: If any man ſhould deny it, let him look upon the* Abdomen *and extreme parts, and his Eys are enough to convince him. Well then, the Serum being thus ſeparated (pray obſerve) and the Maſs of Blood not enough diluted, the oral Glands muſt neceſſarily be defrauded of their due Moiſture, and conſequently Thirſt excited. But ſtill you harp upon the ſame ſtring: Thoſe Medicins which reſtore the Conſiſtence of the Blood, cannot well be ſuppoſed to impair it. Now Acids reſtore it; and* Steel *in particular.*

Anſw. *That Steel is of excellent uſe, and a very great Reſtorative, is not to be denied. But under favor, tho you diſcourſe very ingeniouſly of the*

the Nature of Steel; yet all you have said will not amount to a proof of its being an Acid: *I am still inclined to think it is an Alkaly. For tho it dos not discover it self to be such by its Color, yet it plainly dos by its Effects,* viz. *its Fermentation with Acids. If, notwithstanding this* Phænomenon, *you will needs have it to be an Acid, why then one Acid will ferment with another; and so one Alkaly with another: wherfore, tho we should subscribe to the Hypothesis, That Alkalies are the Original of all Distempers, yet 'tis hard to exclude the use of them in general in Distempers. For some Alkalies or other might be found out that should dispute it with these offending Alkalies. You are pleased to quote* Beeker *for a confirmation of the Acidity of Steel. The chief Sentence of the Citation seems to be this.* Hoc tantum hic loci allegabo, omne Acidum substantiæ martialis esse, in quocunq; oleo, pinguedine, fuligine, limo, silice & arenâ, immo etiam ipsâ flammâ reperibile, & ad oculum demonstrari posse; quæcunq; ergo naturæ Acidæ & martialis sunt, illa potestatem habent Alkali tanquam substantiam metallorum mercurialem alterandi & transmutandi. *If I apprehend the Sense of the Author, this dos not make so much for you. But suppose it did,* Beeker *was never reckon'd infallible. And tho* Chalybs *were an Acid, it dos not follow, because one Acid will renew the State of the Blood, that others will do so too. But since we have so happily fallen on this Subject,* viz. *the strengthning*

the Mass of Blood, let us see what other Medicins besides Chalybs *are subservient to this end. And here I suppose your bitter Herbs may not be* infimi subsellii. *'Tis needless to prove it; for hardly any Physician but what has experienced it. I do not believe you will dare to say, there is any thing of an Acid in these, since you know very well that Alkaly may be extracted from most, if not all of them. So that poor Alkaly is effectual in some Cases you see. But then, you say,* Oak-Bark, Bistort, Tormentil, Comfry-roots, *and others of that Tribe will reduce the Blood to Consistence.* Answ. *That they are astringent I grant; whether they will reduce the Blood, or invigorat its depauperated Principles, I much question. 'Tis very rare to see them prescribed in* Dropsies, Cachexies, *and the like Distempers where the Blood is poor and low. They are proper indeed in* Fluxes *by virtue of their astringent Faculty; but then they ow this Astringency to Acids: Whether they do or no, it matters not much. But why may not this Quality be derived as well from the Terrestrious as the Salt Particles of these Vegetables; since* Bol. Arm. Terra Lemnia, *and other plain Earths are very stiptic? I do not say these Earths are so simple as to have no manner of Salt in them, but surely they have very little Acid.*

Remark. I am very glad you own Alkalies to abound in *Pleurisies* and *Rheumatisms*, and other inflammatory Distempers. Upon my word, if this be granted, I have gain'd a great

great point; for to have put the World into a true way of curing but one single Distemper, is what deserves no small Honor. And for the business of *Dropsies*, I assure you I have no reason to recede from what I have said upon that Subject; but if you or any one else would favor the World with as certain a Method of curing a confirmed *Ascites* or Belly-Dropsy, as I have done of curing *Rheumatisms*, *Gouts*, &c. I my self would spare no pains to spread that Man's Fame, let him be who he would: But this I am afraid I shall never live to see perform'd, because the Tone of the Parts principally affected, is so destroyed and spoiled, that it would be next to a Miracle to recover them. [In the preceding Tract I have given a short account of some late improvements I have made, relating to the Cure of this *Herculean* Distemper.] And tho you are pleased to charge me with arguing unfairly, for attributing the Cause of Dropsies in a great measure, to a destruction of the Tone of the Parts, because I had not before in my Etymologies of Distempers, taken sufficient notice of that mtater; yet suppose I had bin deficient in that point, I hope it is no crime to bring it in late, rather than not at all. But I assure you, I have frequently taken notice of that matter, and lay as great a stress upon it as on any one thing whatsoever; and do still insist upon it, that the great Thinness of the Blood in Dropsies dos very much procede from the great quantities

quantities of Liquids taken into the Body, and the ſmall quantity diſcharg'd, by reaſon the Parts of it have loſt their Tone, and therfore the Secretions are not rightly to be perform'd; a man that drinks two Quarts in twenty four hours, not being able to piſs, perhaps, above four Ounces, Perſpiration alſo being greatly hindred upon the ſame account. Now for want of a due ſecretion by the excretory Veſſels, the Blood is clog'd with too great a quantity of Serum; which being admitted into the Lymphatic Veſſels, and impregnated with Alkalin Particles, cannot freely paſs along theſe Veſſels becauſe of its Gelatinous quality, by which means they are diſtended to a vaſt Magnitude, and ſomtimes broke; and from the broken Lympheducts it is, that ſo great a quantity of Liquor is thrown into the Cavity of the Abdomen, which diſtends it to ſuch a bigneſs. But for all this great quantity thrown into the Abdomen, the Blood is ſtill loaded with three parts in four more of Serum than it ought to be, and therfore the Oral Glands cannot want ſufficient Moiſture. But here lies the thing, the Matter that in a ſtate of health is ſeparated by the Oral Glands, is impregnated with a Noble Volatil Acid, as dos manifeſtly appear. But in this caſe the ſaid Acid is almoſt, if not totally deſtroyed, and the ſaid Lympha impregnated with Alkaly, which is the occaſion of the great Thirſt that attends Hydropical People. But ſince I have

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attributed an Acidity to the *Lympha* in a ſtate of Health, and yet aſſert there is no ſuch thing as a pure Acid to be obtain'd from the Blood, either in a morbid State or in a State of Health, that being invelop'd in the Oily Particles, I ſhall preſume, to avoid further Objections, to make a little excurſion concerning the general uſe of the *Glands*.

I will at preſent divide the Glands into two kinds or ſorts, the firſt of which ſeparat the Excrementitious Particles from the Blood, and throw them quite off by ſome proper Emunctories, ſuch are the *Excretory Glands* of the Skin, the *Glandulæ Renales*, the Glands of the Liver, *&c.* all which do ſeparat an Alkaly from the Blood, to be thrown off as Excrement; and if by any accident theſe Glands are made uncapable of performing their office, ſo that the Blood cannot be rid of its Excrements, a Diſtemper of ſome kind or other muſt neceſſarily follow. The ſecond kind do receive a Noble Subſtance into them to be again mix'd with the Blood, or for other uſes, of univerſal advantage to the whole Body. The Glands of the Mouth do ſeparat the thin Juice impregnated with a Volatil Acid, which Juice was never deſign'd by Nature to be thrown away, as ſome *Tobacco-takers* laviſhly do, but to impregnat our Food as 'tis chew'd in the Mouth, and afterwards to diſſolve it in the Stomach, and turn it into a Subſtance fit for the nutrition of our Bodies. The other

Recep-

Receptory Glands, for so I presume to call all those which do not separat Excrements from the Blood, do, by the extraordinary providence of Nature, receive into them that fine Substance which is superfluous in the nourishing of the Parts; and by means of the Lympheducts, in a gentle and easy course, do convey it to the *Ductus Thoracicus*, where it is mix'd with the Chyle, just before it is admitted into the Blood; and that this *Lympha* is a mild Acid has already bin own'd by many. So that here you see, if there be any *Acid* in the Body superfluous, Nature is very provident in the preservation of it, and equally careful in throwing off the superfluous *Alkaly* by a multitude of Emunctories, or Excretory Glands.

From what has bin said concerning the use of the Glands, a great many *Phænomena* concerning Dropsies, and other Distempers, may with ease be solved. In Dropsies, for instance, as before observed, the Excretory Glands not being able to perform their Office, the excrementitious Alkaly, together with its watry Vehicle, is detained in the Body; by which means, tho the Body may increase in bulk, yet none of the Parts receive their due Nourishment; and the Tone of the whole being relax'd and spoil'd, the Receptory Glands forget their duty also, and instead of receiving into them a pure acidulated Serum only, are forced to let pass some Alkalized Excrementitious Serum, which makes the whole a kind

kind of Gelatinous Consistence; which not being able to pass along the Tracts of the Lympheducts, dos so distend them, as to cause swellings in the Belly, and œdematous Tumors in the Legs, *&c.* And Belly-Dropsies having for the most part a Jaundice as their forerunner, nay frequently going along with them thro the whole course of the Distemper, is no small Argument to prove the Truth of what I have before observ'd, *viz.* that some of the Excretory Glands have bin defective in their duty, by which means all the Body is impregnated with this yellow Die, and the whole Oeconomy put out of order: And that the Yellowness of the Body procedes from a redundancy of Bile, no body denies; and that Bile is an Alkaly you don't disown. But now come we to the curative part of this horrid Distemper; which tho rarely to be perform'd in a confirm'd State, yet in the beginning, nay after it has made some progress, is frequently to be done, and that as effectually by *Chalibeats* and *Bitters* as by any sort of Medicins. But here for want of making Experiments (by which means only we are capable of arriving to any sort of Certainty in the knowlege of things) you say that *Steel* and the *bitter Herbs* are Alkalies: and the reasons you give for it are, because Steel being mix'd with Acids, will cause an Effervescence; and the bitter Herbs, after burning, do afford a fixt Alkaly. Solid Reasons indeed! For all

Sul-

Sulphurs being mixt with Acids will cauſe an Efferveſcence, nay ſome of them take fire; and that all Metals are full of Sulphur is paſt diſpute; and from the Aſhes of all Plants, even *Sorrel* it ſelf, may be extracted a fixt Alkaly; therfore by this way of arguing, *Sulphur* muſt be an Alkaly, and ſo muſt *Sorrel* alſo. But the manner of the Production of volatil and fixt Alkalies having bin ſpoken to before, I ſhall ſay no more to that Matter, but touch a little upon what I take to be the General Principles of mixt Bodies, not that all theſe Principles are to be ſeparated from all Bodies, ſome containing all, ſome two, three or four of them; and according to the different mixture of them, different Subſtances are produced. *Acid* and *Sulphur* I take to be the vital active Principles in Bodies, *Alkaly* the Principle of Death and Corruption, *Water* and *Earth* the two paſſive Principles. From theſe five Principles I think I can more eaſily account for the various *Phenomena* in Natural Bodies, than from the old five of *Salt*, *Sulphur* and *Mercury*, *Water* and *Earth*, or from any other Principles yet broach'd in the World. I have only mentioned this matter, to let you know the Principles I go upon, but ſhall leave the further proſecution of it to another opportunity. Now to return to the buſineſs of *Steel* and *Bitters*; as for *Steel*, I have ſaid ſo much already concerning that in ſeveral places, that I ſhall not here trouble my ſelf nor you any more about

bout it. But if we can cure Distempers with it, it is no matter tho one takes it for an Alkaly, and another for an Acid; nay I can assure you, if you will but black your Fingers a little with Charcoal, you will find it to be a sulphureous Acid. As for *Bitters*, I will be bound to lay a good Wager with you, that if you put a pound of *Centaury* or *Wormwood* dried into a Retort, and distil it with an easy Fire till all be come off that will, and afterwards calcine the *Caput Mortuum*, and extract the fixt Alkaly from the Ashes, if you don't find a treble or much greater proportion of Acid to that of Alkaly produced from these most bitter Plants, I will be a loser. But further, if Bitterness did procede from a predominancy of Alkaly in any Body, why then a man would suppose the more this Body were impregnated with Alkaly, the bitterer it would be: but upon my word I have frequently experienced the contrary. For when I was a Champion for *Alkalious* Medicins (as I am not ashamed to own I once was) I have extracted a Tincture from *Myrrh*, *Aloes* and *Saffron*, with well rectified Spirit of *Sal Armoniac*, hoping to do great Feats with it. Now after I had digested them together for ten or twelve days in a gentle Sand-Heat, instead of having the Tincture bitterer than the Myrrh and Aloes themselves, I always found it almost, if not altogether without any bitterness at all; nay, after a longer digestion it has bin almost perfectly

fectly ſweet. However, I lay no great ſtreſs upon Taſts, the differences in them being one of the ſpecific differences the Great Creator has planted in things, of which we have as yet but very little knowlege; tho, I confeſs, I greatly lament our Ignorance in this matter. A few degrees of predominancy of any of the Principles, cauſe very great alterations in Bodies, both as to *Color*, *Smell*, and *Taſt*; and for ought I know, a knowlege of theſe minute Circumſtances is what we have no poſſibility of arriving to in this World. But one word more concerning *Bitters*, becauſe you will account them *Alkalies*, and lay ſo great a ſtreſs upon them. *Vitriol* of *Silver* is the moſt exalted Bitter I know, and a celebrated Medicin in the Cure of Dropſies, but yet is no Alkaly; and after you have conſidered it, I believe you won't term it ſo. What you ſay to *Acids* fuſing the Blood, is directly contrary to what our Predeceſſors have aſſerted, who attributed its coagulation to Acids, and to what you your ſelf ſay a little after. But what I attribute to *Acids* in general is this, that they keep the Blood in its due ſtate, *viz.* the Fibrous and Globulous Parts in their due Texture, and the *Serum* fluid, by which means the whole Maſs is capable of performing its proper Offices without being liable to Stagnations; and alſo by confirming and ſtrengthning the Tone of the Parts, they greatly contribute to the aforeſaid end, *viz.* preventing Stagnations,

tions, and promoting the Secretions. As for what you ſay concerning the giving of Oil of *Vitriol* alone, I readily aſſent to it, that it will make mad work; but I hope you cannot charge me with any ſuch mad Practice. When People are cold, they naturally run to the Fire for warmth, yet none but mad Perſons will put their hands into it; and tho Culinary Fire, if People are ſo imprudent as to throw themſelves into it, will conſume and deſtroy them, yet a prudent uſe of it is a very great comfort to Human Life: and were it not for Fire, the *Ruſſians* and other *Northern* People would have a very ſad time on't during their long Winters. So it is in relation to Oil of *Vitriol*, which tho given alone will cauſe Death and Deſtruction, yet being diluted in proper Vehicles, and given in very large quantities, will in many caſes produce as noble Effects as any one Medicin now known. It is the buſineſs of a Phyſician to conſider the Nature and Conſtitution of his Patients in all reſpects, and to proportion the Doſes of Medicins as their Stomachs and Natures will bear. I hope there was never any ſo wild, becauſe Oil of *Vitriol* is recommended in Fevers, as to give it alone without a Vehicle. But what you charge upon Oil of *Vitriol*, may be retorted upon moſt other Medicins of an active nature: Becauſe an ounce of *Calamelanos* given at once to a Man will ſcarce fail of killing him, I ſuppoſe that dos not deter you from giving a few grains of it to a

young Child. An ounce of *Rozin of Jallap* will kill a Plowman, and yet a few grains may with safety be given to a very tender Constitution. I could retort a great many things of this kind upon you, were it not altogether needless: for that Physician that gives a Medicin without first considering it in all its circumstances, deserves to be banished the society of Mankind; and he that knows most, is generally most cautious: and tho I am so clamor'd at by my Brethren, yet I can boldly say, the greatest slips I ever made, have bin from my over-cautiousness; and I will rather chuse to commit three faults from that, than occasion the loss of one man's Life from rashness and inconsideratness. What you have objected against Oil of *Vitriol* taken alone, has long since bin objected by other People, and the Objections fairly answered. I shall presume to transcribe what I have met with in an *Apologetic Dialogue* between *Philerastus* and *Chemista*, upon the same Subject, *Theatrum Chymicum*, pag. 86, 87. Vol. I.

Ph. *Absit tamen Vitriolum, Chalcithin, atq; aliaid genus leprosa, impura, atq; corrodentia mineralia in humanum corpus ingeri, & ad perpetuam tui nominis ipsiusq; artis infamiam usurpari.*

Ch. *Quid ita, hospes mi?*

Ph. *Nam cum oleum Vitrioli etiam à Gesnero toties laudatum, scutellam stanneam exedit; quis simile periculum in stomacho nostro membraneo non meritò verebitur?*

Ch.

Ch. *Aspera tu quidem tela elidis, sed quæ facilè retundi queant à Philosopho excitato. Nam si oleum Vitrioli propter stannum ex eo exesum humano corpore exulabit; quid vino sublimato, Aceti Mellisque spiritu, quid tale, & Limonum Citrorumque succo fiet? Nam eorum unumquodq; stannum absumere, vel semestris medicus agnoscit.*

Ph. *At non tam parvo temporis curriculo atq; spiritus ille vitriolatus.*

Ch. *Imo sanè minori, si cum nostro illius exhibendi modo conferatur ratio; nollem enim te aliquem Chemistam tam stupido ingenio præditum existimare, ut oleum Vitrioli nullis aliis mixtum liquoribus propinare ausus sit, sed potiùs ad aquæ rosaceæ vel alterius liquoris libram olei vitriolati guttas totidem adjicere, quæ ad aciditatem comparandam satis esse queant: cui liquori oleo Vitrioli accrescenti, si tantum stanni immerseris quantum aceto, nullum non invoco supplicium, nisi stannum multo magis corrosum reperiatur. Verum si hoc oleum Vitrioli vel etiam Sulphuris in usu esse non mereatur propter erosionem, quo se conferent Cantharides, à Galeno inter ea medicamenta relatæ, quæ ne gustare quidem audeas propter summam putrefactionem atque erosionem? tamen veterum ferè omnium atq; multorum Neoticorum praxes eas ad urinam provocandam, penisq; ἀτονίαν & suscitandam Venerem usurpant atque commendant*

Ph. *Nequeo diffiteri; sed tamen parva quantitate eas prescribunt, & non nisi aliis convenientibus*

entibus rebus admixtas; quo quidem modo exhibitæ, non solum innoxiæ perhibentur, sed etiam per-salutares.

Ch. *Vera prædicas, atq; ego itidem respondeo; Olea prædicta debita quantitate, mixtura, præparatione exhibita, tantum non corrodere corpus humanum, sed ejus spiritus reficere, febres extinguere, obstructiones aperire, putredinem arcere, venena exigere, sitim sedare, ulcera percurare, omnesq; illas vires cum laude sua plurima exercere, quas illi Gesnerus epistola ad Cosmam medicum, aut Paracelsus in libro de Vitriolo ascripserunt.*

I could produce a great deal more of this kind from many of the antient Chymists, who were honest men, and to the best of their knowlege endeavor'd to reform *Physic*, and put Practitioners upon a right bottom: But they were defective in so many things, that their undertakings wanted success, tho from some of their Writings honest and inquisitive men may receive great advantage. Now tho I will not trouble you with any thing more from the Antient Chymists, yet I shall make bold to transcribe a Letter I lately received out of *Yorkshire*, there being somwhat in it relating to the point in hand.

Vir

Tertio Non. Martii.

Vir Digniſſime,

TRactatus tuos ſummis cum deliciis & voluptate perlegi, & tuum in promovendo illo Nobiliſſimo Medicinæ ſtudio inſtitutum maxime demiror in humani generis bonum univerſale. Macte, Bone Vir, melioribus avibus, & Momos aſpernare. Te certum facio me Acidis uſum eſſe 10. *annis elapſis ſummo cum ſucceſſu; & Alkalia tantum ut abſorbentia Acidi æſtimo. Aſſiduâ experientiâ videtur quantum valet appetitus & digeſtio: & quid magis dubium hoc in caſu quam Alkalia, & quid melius Acidis? Acidum eſt ſolum fermentum Ventriculi. Quid Coward audeat dicere, nemo advertet. Omnibus in ſeculis præteritis quot morbos edomuit Acidum, non neceſſarium eſt enumerare. Virum quendam habui putridâ Febre laborantem, quem tantum Sp. Vitrioli in aquâ frigidâ (Deo favente) reſtitui. In Hæmoptoe, Hydrope, fluxu muliebri, & fere omnibus in ventriculi morbis; Scorbuto infinitos fere curavi Acidis commixtis, & in vehiculis appropriatis exhibitis. Equitem vicinum meum Calculo cum Paraliſi & Hæmorrhodali fluxu decumbentem quodam Acido ad priorem valetudinem reduxi, & ab Orco detraxi: immo quamvis in Hypocondriaca affectione Acidum culpamus, tamen quid emolumenti in iſto Proteo accidit à quodam Acido non eſt nunc enarrandi locus. Hic Acidus meus liquor omnes obſtructiones reſerat & flatum,*

Gas illud ſylveſtre compeſcit, & omnes iſtos motus irregulares componit, inſtar fulminis. Si quicquid in Praxi vel Lectione meâ occurrit, ſummâ cum ſedulitate ad te, mi bone Vir, mittetur.

Nam tui favoris ſum ſtudioſiſſimus,

Jo. Watſon.

Poſtſcript. Be pleaſed to direct a Letter to me to be left with Mr. *Ulſter* Apothecary in *Burnſly* in *Yorkſhire*, by *Doncaſter* Bag. I beg a Literal Correſpondence, and ſhall communicat to you ſome *Acid Arcana*, for that name they deſerve.

I hope what I have ſaid is ſufficient to remove that Mighty Objection about the hazard of giving Oil of Vitriol alone: But I might have ſpared my ſelf this trouble, for I am almoſt poſitive, that there is not a Phyſician in *Chriſtendom* of any buſineſs, tho never ſo great an aſſertor of the uſefulneſs of Alkalies, who has not ſome time or other made uſe of even Oil of *Vitriol*, that dangerous Acid: but how they can anſwer for it I cannot tell; for if Acids are the cauſe of Diſeaſes, how they dare with a good Conſcience give even the moſt temperat Acids to their Patients, I know not; and I am ſure themſelves can give no reaſon for it: but I believe it is from a conviction that nothing is to be done without them. Again,

if

if Acids were so pernicious to Mankind, as some would make us believe, I wonder the College of Physicians don't unanimously petition the Parliament to prohibit the Importation of *Oranges* and *Lemons* in such vast quantities as we now have 'em.

You greatly harp upon that string, that Acids held in the Mouth won't quench the violent Thirst of Hydropical People. To which I answer, that it is impossible when the whole Mass of Blood and *Lympha* are contaminated with Alkalious Particles, that the washing the Mouth only with Acids should take away the Thirst, when the parts are continually washed with the contaminated Juices, and consequently the particles of the Acid must be soon obtunded. But however, nothing is more grateful or delightful to an Hydropical Person, than a slice of Lemon or some such thing. Common Salt I allow will excite Thirst, but not *quatenus* Acid, for Spirit of Salt will take it off as soon as any thing. But, Sir, I assure you I have stumbled more at Common Salt's exciting Thirst, than at any thing else besides, and therfore have spared no cost in making Experiments to find out the reason of it; at last, after much labor and sweat, I found there was no Common Salt but what had more or less of a cursed thing call'd *Bittern* mixt with it, of which you may be perfectly inform'd at any Salt Works. Now this *Bittern* is the most corroding fixt Alkaly in Nature;

and tho it be inconsiderable in quantity in respect of the Acid the Salt contains, yet it will fix it self upon the parts after the Acid of the Salt is all dissolv'd, and so excite Thirst. Of this *Bittern* you may expect more in another place; for had I not a design to satisfy you, I would have taken no notice of it here; because the allaying of violent Thirsts I only attribute to manifest Acids, and common Salt not being one of that sort, it matters not whether it will allay Thirst or not. I love not repetition, but for once I shall be guilty of it. You may remember in another place I tell you, that those things which by Distillation afford a greater quantity of Acid than of Alkalious Substances, are to be reputed Acids, *& vice versâ*: now common Salt affords nineteen parts in twenty more of Acid than of Alkaly, and therfore is an Acid; but before Distillation the Acid is so invelop'd, tho it contains so much of it, that it is not discernable to the Tast. I believe no one that has blackt his Fingers, will deny *Guaiacum* to be an Acid, but at the same time I believe it was never prescribed to allay Thirst. Things, tho of the same Tribe, are differently to be administred, according as they are differently specificated by Nature. It is not a certainty of the knowlege whether *Acids* or *Alkalies* are the Causes of Diseases, that will presently make a man a Physician, tho it will go a great way towards it, but a thorow knowlege of the different specifications

cifications of Nature must also concur.

You charge me with contradicting my self, after which you should have bin sure to have avoided any such thing your self; but however in one place you say, that Oil of Vitriol dissolves the Blood, and in another that it coagulats it: now I shall take no advantage of this slip, but conclude my Remarks upon this Paragraph, having already spun them out to too great a length.

The next Paragraph is too long to transcribe, and there being little material in it, I shall only make some general Remarks upon what I find worth taking notice of.

You first of all charge me with saying, that neither too much nor too little Acid must be given, which is the sum of a Page or two, *viz.* 19, and 20. In answer to which, I do assure you, that no *Virtuoso* need be ashamed to imploy his time in considering the due proportions of things requisit to accomplish the business he undertakes. Now in Physic he that dos not understand the true Rules of Proportion, deserves not the Name of a Physician. He that will prescribe an Ounce of *Jallap* instead of a Dram, deserves to be hang'd; and who but a mad man will give a Pound of Oil of Vitriol, when forty Drops in a pint of Water is all that is desired? But, Sir, prudent Physicians have a wonderful Director in relation to manifest Acids, and indeed to every thing else, *viz.* the Stomach, which is a nice judg

judg of things; that which is agreable to it being receiv'd and retain'd with pleasure, but that which is disagreable rejected and abhor'd. However, it must not be overloaded with those things in which it takes the greatest delight. Now Manifest Acids it more covets and delights in than in any thing besides; but when it has enough to supply its wants, it gives sufficient item of it: and if the Stomach be rightly consulted, it is impossible the Blood should be overcharg'd with them; but if at any time People are not sufficiently cautious of that matter, but load the Stomach with more manifest Acids than the Body has occasion for, it won't fail of rejecting them by Vomit. This Matter may at any time be safely experimented by an over-large draught of Vinegar, in any Case where the Body has no need of it, or at least in so great a quantity at a time; for which reason I tell you that the Blood cannot superabound with Acids, as it's plain in fact it dos not, neither in a Morbid nor Healthy State, because the Stomach will not receive or retain more than it has occasion for: but tho it cannot overdo, yet it is very frequently defective in conveying a sufficient quantity into it, either thro its own fault, or the fault of the Physician who forbids the use of them, and so the whole Body suffers damage. How greedily will the poor Stomach imbrace the Juice of an *Orange*, or the like, in a Fever? and how scornfully will it reject and abhor any thing of

a contrary nature? Nay, the uſefulneſs of Acids is ſo evident and extenſive, that it is almoſt a ſhame they ſhould now want a Champion, after there has, for many years together, bin ſo great a noiſe made about *Experimental Philoſophy*, and even public Societies, in many Nations, erected on purpoſe to cultivat it.

But to return: I am apt to believe, if you take the following advice, you will ſcarce be guilty of an Error in the giving of manifeſt Acids, *viz.* always give them in ſuch quantities as the Stomach will receive them with pleaſure and delight, and never refuſe them when the Stomach earneſtly craves them; this is the method I obſerve at preſent, and believe I ſhall never recede from. I confeſs it may be lawful ſomtimes in very extraordinary caſes to ſtrain a point beyond what Nature craves; but herein if the thing ſhould chance to be overdone, all the damage that can inſue is occaſioning a puke or two. This you may take from my conſtant experience, and believe me I would not willingly impoſe upon you and the World. But in general, it is always neceſſary for us Phyſicians, who are, or at leaſt ſhould be, only Nature's Servants, ſtrictly to obſerve her Neceſſities, and not to outrun her Dictats.

Without making the leaſt Experiment to convince me of being in an error, you go on to range *Saſſafras* among the number of Alkalies:

lies: but when, from Experience, I assure you that *Sassafras* is an invelop'd Acid, I think you ought not to trouble me and the World with conjectures; and were it not that I value and respect you, I would not take the least notice of them. As for the remaining part of this Paragraph, I think I need take no notice of it, having sufficiently answered every thing that looks like an Objection in it in my former Remarks; and therfore shall, in your own words, conclude, that if I have any where expreſt my self indecently, I hope you won't attribute it to rudeness or disrespect: for I assure you, I think you a Blessing to the Country where you live, and doubt not but I shall see you an Honor to our Profession.

I should have concluded, but that you also begin again; and that I may not be unmannerly, I shall for once keep you company to the end of your Journy, but design no more to trouble the World with Disputes; and if any thing more of that nature offers it self, worth taking notice of, it shall be included in some Practical Discourse. And so we pass on to your Reflections upon the First Part of my *Essay* of *Alkaly and Acid*: And first,

Of

Of the SMALL POX.

WHAT I think worth taking notice of at preſent in your Reflections upon this matter is, That you honeſtly allow the giving of *Acids* in a *Flux Pox*, the only dangerous one, and from which our Patients are in moſt hazard: but in *Benign* Poxes you commend me for doing nothing, and indeed I ſhall always do ſo where my Patients have no occaſion for Medicins. I am a Friend to *Rad. Serpentariæ Virg.* as well as you, in all thoſe Caſes where there is an occaſion for *Cardiacs*; that and *Saffron* being as Noble Cordials as perhaps are known; yet they muſt never be given but with due caution and circumſpection. But I am a profeſſed and declared Enemy to *Pul. è Chelis*, and all things of that kind. And once again I aſſure you, that *Rad. Serpentar.* upon diſtillation will appear to be a ſulphureous Acid; and in Caſes where the Pox dos not come out kindly, and the Pulſe is low, an Infuſion of that Root in Vinegar, or ſome ſuch thing, will do very good feats. I confeſs the Teſtaceous Pouders in *Benign Poxes*, are frequently given without any evil conſequence; but the reaſon is, that the Patients are generally in ſo good a condition, and have ſo much ſtrength of Nature to ſupport them, that it is almoſt impoſſible to kill them: but what fatal work

they

they make in *Flux Poxes*, or any other of a malignant kind, is too frequently seen. Here obſerve the difference between your Method and mine, even by your own confeſſion. Mine is principally ſerviceable in dangerous Caſes, Yours where there is no danger. Granting this, you may ſtill keep your Method to your ſelf, and I will ſtick to that which will avail in hazardous Caſes, and only look on in thoſe where my Patient needs no help. You at laſt blame me for giving *Syrupus è Meconio* in the beginning of the Small Pox; but are too haſty in cenſuring me on that ſcore, for of all men I am leaſt to be blam'd for tampering with Opiats. If you remember, the occaſion of my preſcribing *Diacodium* in the beginning of the Small Pox was this, *viz.* If the Patient's Stomach be overcharg'd or clog'd with viſcous Matter, I preſcribe an eaſy Vomit; and after its operation is over, to allay the hurry and diſorder occaſion'd by it, I preſcribe a little *Diacodium*, but never proſecute it afterwards, as ſome people fatally do. I have not time, elſe I would remark upon you Line by Line; but having taken notice of what is material, I ſhall let fall the reſt, and leave you and your Friends to make the beſt of it; yet cannot forbear to aſſure you, that two or three of my greateſt Enemies in this Town, have of late preſcribed Acids plentifully to their Patients in the Small Pox, and at the ſame time have rail'd at me for ſo doing: whether this be like Gentlemen, I leave the World to judg.

Of

Of the SCURVY.

IN this matter you perfectly agree with me in my Practice, only you would bring in the *Bitter Herbs* as great assistants in the cure of this Distemper, and these Herbs you will have to be Alkalies. As for *Bitters* I greatly approve of 'em in their proper places. But having before put you in a way to be satisfied that they are not Alkalies but Acids, I shall not here trouble you any more about it. Nay, if we can but once agree in the main Point of curing Diseases by any particular sort of Medicin, tho you account it an Alkaly and I an Acid, we ought not to fall out, but give God thanks we are able to perform the Work we pretend to: Yet at the same time I think a Physician ought as much as may be, to know the true reason why a Medicin performs such and such Operations. And I must confess I shall be very unwilling, upon any occasion, to prescribe a Medicin, for the manner of whose operation I am not able to account. As for what you say concerning the Scurvy that attends the People in the North part of *Devonshire*, I think I have sufficiently accounted for it already; and I doubt not but impartial Readers, who will give themselves the trouble of perusing my several Tracts, will acknowlege it.

Of

Of RHEUMATISMS.

WELL met my good Friend! I muſt confeſs you have almoſt com to an agreement with me in ſeveral things before, yet here you ſay your Practiceand mine are the ſame, but don't mention how long you have uſed this Method in the cure of this Diſtemper. However, I can't preſume you had it from me, but that it was your own Judgment that led you to it. I hope, for the good of the Country where you live, that in a little time we ſhall agree in more things than the cure of *Rheumatiſms*: yet I would have you remember, that in another place you blame Acids as the cauſe of Pain, and here you profeſſedly uſe them in the cure of a Diſtemper, the principal Symptom that attends which is exquiſit Pain.

Of CONSUMTIONS.

A *Conſumption* is a Diſtemper, the progreſs of which in this our Iſland I have oftentimes heartily bewail'd. It is likewiſe that of which moſt of my Predeceſſors (as before obſerved) have died, even in the prime of their Age; and is alſo what I have more cauſe to be afraid of than of any thing beſides: upon which ſcore I have ſpent a great many days and nights

in

in considering the Nature and Cause of this Fatal Distemper, which deprived me of the best of Fathers while but a Child, and also of some other of my dearest Friends. Now the reason I have not hitherto spoken so much about it as of other Distempers, is, because I have bin some years in collecting Observations in order to write a particular Tract of *Consumptions*, and was unwilling to anticipat what I had to say upon so weighty a Subject, tho I was able to say as much concerning that as any Disease of which I have treated. Nay, I am apt to believe, I may without vanity say, that I have cur'd more true Consumptions in the space of one Year last past, than any Physician in *England* has done, and that by the means of Acids either Manifest or Invelop'd; an ample account of which, as soon as my business will permit, I design to make public. But however I shall spend a little time in remarking upon what you have said. You allow Acids to be proper and beneficial in those Consumptions not attended with a *Catarrh*, which is a concession very few Physicians besides will give their assent to; or at least if they will, they are but lately come over. But the main thing you harp upon being, that manifest Acids are not proper to be used in Catarrhs, I shall a little consider that matter: For tho a Catarrh will cause a Consumption or wasting of the Parts of the Body, yet it is not what we in *England* commonly

call a *Consumption*; the Distemper called *Tabes Anglicana*, or the *English Consumption*, proceeding from an ulceration of the Lungs: and in these cases for the most part we have no Catarrh, tho sometimes it dos attend them; but one of the principal Symptoms of this Distemper is the discharge of a great quantity of tough, yellow and greenish *Pus*, in which cases you allow Acids to be proper: nay tho there be a Catarrh attending them, yet it is not from that that we make our fatal Prognostics, but from the good or evil nature and quantities of the aforesaid *Pus*, with some other Symptoms not necessary here to enumerat. Nay it is not uncommon for our Consumptive People to bring up from their Lungs by coughing, as perfect Chalk Stones as ever were found in the joints of Persons severely handled with the Gout; which Chalk I am sure was never the product of an Acid. But however, not to insist any longer now upon this matter, it not being the proper place for it, I shall return to the business of Catarrhs. I have before taken notice, as you your self here own, that the *Saliva* is a noble Acid, and convey'd to the Mouth for a most noble purpose, *viz.* to be mix'd with the Food in chewing, and afterwards in the Stomach, to turn it into a substance fit for the nutrition of our Bodies. Now if on any occasion the Glands of the *Pharynx*, and other Glands about the Mouth are over-relax'd that they can't retain the *Lympha* in their proper

proper receptacles, but let it fall continually from them, being what we call a Catarrh or Defluxion, this muſt inevitably cauſe a tickling Cough, not becauſe it is an Acid, for even a defluxion of the moſt ſimple Water would produce the ſame effect; but the Body being continually robb'd of this moſt noble Juice, cannot fail of being waſted and decay'd by it. And that the cauſe of a ſimple Catarrh procedes from a relaxation of the texture of the Glands only, and not from the Lympha (contain'd in, and continually brought to them) being overacid, the following eaſy Cure is ſufficient to demonſtrat, *viz.* Let ſome *Maſtic* and *Olybanum* be made into impalpable pouder, and with a long Quill, or a hollow Inſtrument made on purpoſe, let it be blown upon the *Larinx* at night going to Bed; the continuance of which for ſome Nights together will frequently do wonders in the cure of Catarrhs. I confeſs this was none of my own contrivance, but communicated to me by my worthy Friend Dr. *Jones*, who is a man of the happieſt invention I ever met with. Now the only deſign in the uſing of this Pouder is, that being immediatly convey'd to the Parts affected, it ſhould cauſe them to contract themſelves, or regain their Tone, and of conſequence the Catarrh will ceaſe. [But becauſe the uſe of this Pouder is ſomewhat troubleſom, I have of late contrived the following Lozenges to be ſubſtituted in its room, from which I have

observed very remarkable effects in all sorts of Catarrhs.

℞ *Terræ Japon. Gum. Tragacanthi Pul. ana dracm. duas; Olei Cinnamomi gut. quatuor; Sacchari Rosati unc. unam semis; Syrupi Balsamici q. s. f. Massa, ex quâ formentur Trochisci, quorum detineatur unus in ore frequenter.*]

This is not all I have to say concerning Catarrhs, but I think as much as is necessary at this time. You tell a famous Story of a Person that had a Catarrh upon him by the over plentiful use of *Sevil* Oranges; but are so deficient in relating several circumstances necessary to be known upon such an occasion, that if I have not already said enough to solve this difficulty, I shall leave you to make your best advantage of it, being so tir'd that I can go no further. And I do assure you it shall be the last controversial Discourse I will write; for if ever I meet with any Objections against my Hypothesis worth taking notice of, I shall clear my self from them as well as I can, in those Practical Discourses that I design (God willing) hereafter to publish. I confess I am over head and ears in debt to the Public, having promised several things which many have expected to come abroad long before this time, and indeed I design'd they should; but several unexpected Accidents have interven'd

ven'd, which have put me by, and hindred me in my undertakings, yet in due time I will indeavor to fulfil what I have promiſed. I ſhall conclude with aſſuring you, that I am now ſo abſolutely confirm'd in the truth of my Hypotheſis, that I am ſure it is not in the power of any man to overthrow it; tho at the ſame time I muſt own I may have bin deficient in ſome circumſtances relating to the explication of it: but Time and further Obſervation, I hope, will clear all thoſe things. Thus wiſhing you to weigh all things in the Balance of Reaſon and Experience, before you paſs a Cenſure, is all at preſent from

Your real Well-wiſher,

Villers-ſtreet York Buildings, May 12. 1698.

Jo. Colbatch.

POSTSCRIPT.

DR. *Coward* took occasion to make some wonderful Reflections upon me and my Hypothesis, in order to recommend a Medicin of his own invention to the World. This Medicin which he calls *Tinctura Sanitatis*, is as Noble in its Nature, as the Author is Generous and Great in his Temper. I can assure the World it is nothing else but the most ridiculous kind of *Sal volatile Oleosum* that ever I saw; and were it not that I am unwilling to expose a Member of the College, I would print the Receit, which was communicated to me by one that has bin imploy'd by him to prepare it. The Doctor cannot but own I am more generous than he has bin, in that I have not publish'd the Story relating to Mr. *Bat* and Mr. *Lord* also. But such poor Enemies as him and *Lee*, are rather to be pitied than any thing else. However, *Sal volatile oleosum* being a Medicin in great vogue with almost all other Physicians, I shall presume to make some few reflections upon the main Ingredient in it, which is the *Volatil Spirit* or *Salt* of *Sal Armoniac*. Now every body knows that the Volatil Spirit, or Salt of *Sal Armoniac* is little else but the Volatil Spirit or Salt of *Urin*, which at best is no more than an Excrement of

of our Bodies. But however, there is ſomthing more that deſerves our taking notice, in order to deter us from the uſe of this Medicin, which is now ſo much in faſhion, to the no ſmall detriment of many. The *Sal Armoniac*, from which the Volatil Spirit or Salt is extracted, is a Compoſition of *Urin*, *Soot*, and *Sea-Salt*; and by the addition of a fixt *Alkalizat Salt* or *Quicklime* (which is the uſual method in making Spirit and Salt of *Sal Armoniac*) the Acid of the Sea-Salt is ſo intangled that it readily lets go from it the Volatil Spirit or Salt of the Urin and Soot; but that of the Soot is very inconſiderable in quantity to that of the Urin. Now the Urin made uſe of for the aforeſaid purpoſe, is generally procur'd from the public Houſes, which is a jumble of all together, *viz.* of People laboring under all kinds of habitual Diſeaſes, as *Pox*, *Gout*, *Scurvy*, *Scrubbado*, &c. And there is ſcarce a Diſeaſe attending Man's Body, but ſome of the morbific Particles are imparted to the Urin; and if the Urin in general partakes of them, the Spirit and Salt muſt do ſo in a more eminent degree: ſo that, I think, a neceſſary conſequence of giving ſuch a Medicin muſt be ſowing the Seeds of Diſeaſes in Mens Bodies. And I believe in my Conſcience that one great reaſon of the late frequency of ſome Tyrannical Diſeaſes, more than heretofore was wont to be, has proceded from the exorbitant uſe of Spirit and Salt of *Sal Armoniac*, and thoſe o-

ther things of which they are prime ingredients. Now I desire that our Ladies, who are subject to Hysterical Distempers, would well consider this matter, because they are generally arm'd with it, to fright away that Distemper, of which I am afraid it is in great measure, if not altogether, the cause, or at least of the increase of the saline Particles of the same kind with which their Blood abounds. I shall say no more at this time, but hope this further Hint, to deter people from the use of Volatil Alkalious Spirits and Salts, of which the Spirit and Salt of *Sal Armoniac* are most common, may not be unserviceable.

I have made use of the words *Spirit and Salt of Sal Armoniac*, as of things somwhat different, tho indeed there is no real difference between them; that which is called Spirit being only a proportion of the Salt diluted in a proper quantity of Phlegm: this is well known to Physicians, but it is probable that other Persons into whose hands these Papers may come, may labor under some difficulty about it, without this Intimation.

FINIS.

A

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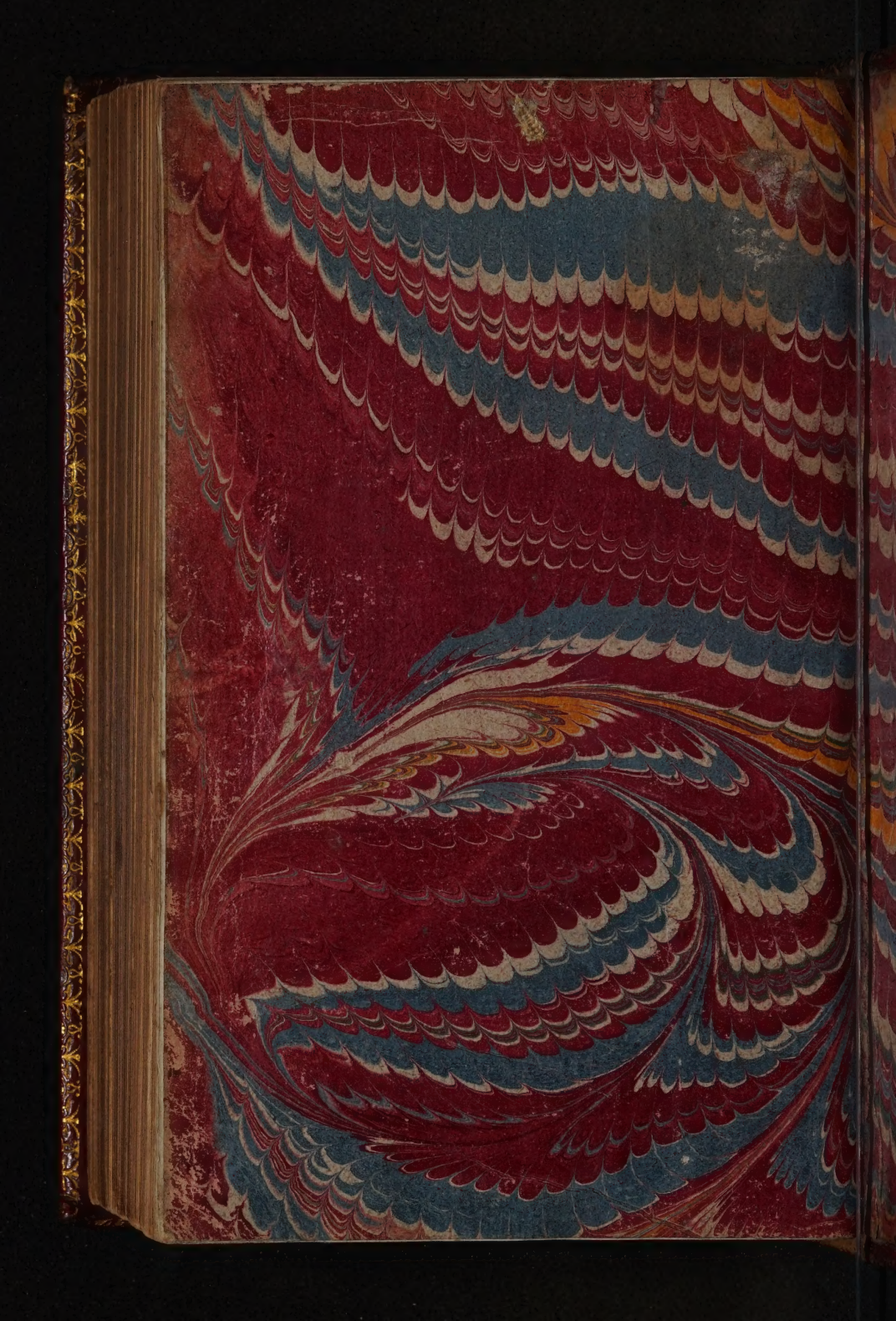
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